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THIRD SERIES VOL 62 NUMBER 9 JULY 1955

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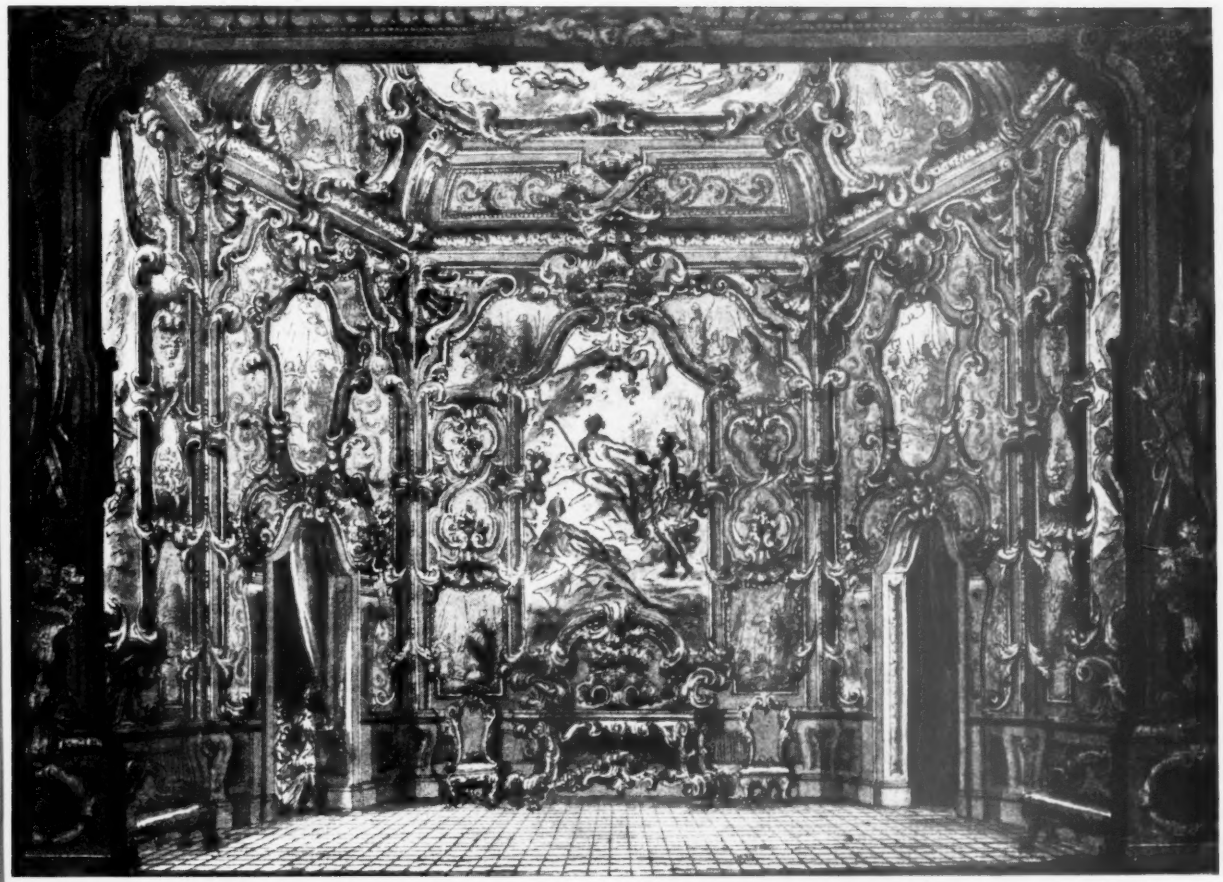
THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

66 PORTLAND PLACE LONDON W1 · TWO SHILLINGS AND SIXPENCE



Design for a stage setting by Giuseppe Galli-Bibiena (1696–1786). From the R.I.B.A. Exhibition of Stage Designs

THESE ARE THE DOORS FOR THE MODERN OFFICE

More Light and Plenty of Privacy

"ARMOURCAST" Glass Doors are ideal for internal use in offices, hospitals, showrooms: anywhere, in fact, where contemporary and functional features of design can help to create a lighter, brighter atmosphere. The pleasantly dappled surface ensures that, although it is possible for people to see at a glance whether a room is occupied or not, they can see nothing clearly. "ARMOURCAST" Doors also help to avoid those accidental collisions that can occur at moments of office pressure. Their plain modern design includes no ledges or trimmings which can catch the dust: nothing could be more hygienic or easier to clean.

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For further information on the use of glass in buildings, consult the TECHNICAL SALES AND SERVICE DEPT., ST. HELENS, LANCS. (PHONE: ST. HELENS 4001) OR SELWYN HOUSE, CLEVELAND ROW, ST. JAMES'S, LONDON, S.W.1. (PHONE: WHITEHALL 5672-6). *Supplies are available through the usual trade channels.* "ARMOURCAST" *is a registered trade mark of Pilkington Brothers Ltd.* A.C.O.I.

BATTLE EVE . . .

A FRENCH KNIGHT, SHEATHING HIMSELF in armour on the Eve of St. Crispin, 1415, could be excused a feeling of supreme confidence. Arrayed against the mighty army of his master, the Constable, was a small band of sick and fatigued men, the English. As he called his page to him he, no doubt, hummed a gay tune.

First he slipped on the hauberk of chain mail, next the breastplate and then the taces of overlapping mail which formed a shirt. Coudes, rerebraces, vambraces and gauntlets guarded his arms and hands, cuisses, jambs and sollerets his legs and feet. With his steel helm firmly in place he was a man of iron—impregnable . . . or so he thought.

A few hours later he galloped down upon the thin line of English archers, but of his company of 1,200 knights but seven score reached the enemy and only three penetrated the spiked barrier the archers had erected. As night fell on what was forever to be known as the battle of Agincourt, 10,000 French lay dead, a host which included 13 earls, 92 barons and 1,500 knights.

Today, less spectacular perhaps but equally fatal to protective iron and steel, is the insidious onslaught of extreme corrosion in many industries and coastal areas. For years, untold damage has been caused by this unseen enemy but now PENFOLD have introduced a veritable 'armour of proof'—fencing that is manufactured from bright drawn STAINLESS STEEL wire, a material renowned for its resistance to the attack of atmospheric corrosion . . . its advantages are manifold. We shall be happy to send you full details on request.

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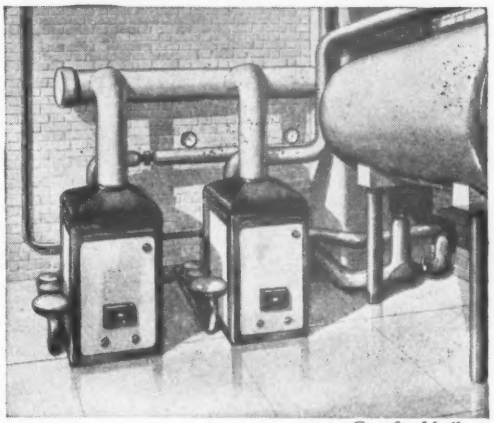
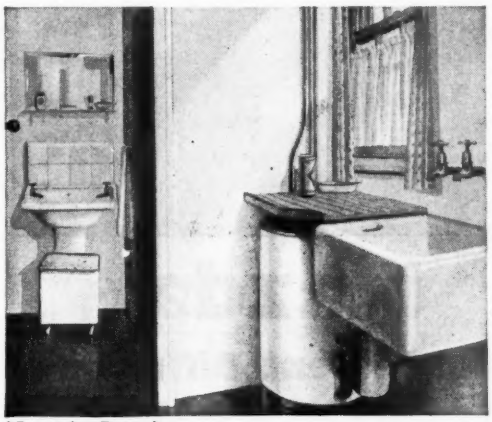
From swimming bath water to salt bath solutions, gas heating has no rival. Gas goes to work rapidly and is simple to operate. Whatever the quantity, whatever the liquid, it burns clean and constant to give you the precise heat you require.



Gas-fired boilers



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Gas can play an important part in improving housing conditions. Costs are kept low by use of existing gas supplies and absence of elaborate structural work. Gas adaptability is particularly suitable to the conditions found in 'Operation Rescue' properties, and, of course, the popularity of gas for water heating and cooking is unquestioned.

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Practically any problem requiring heated air can be solved by gas whether it is for space heating, drying or for industrial processing.

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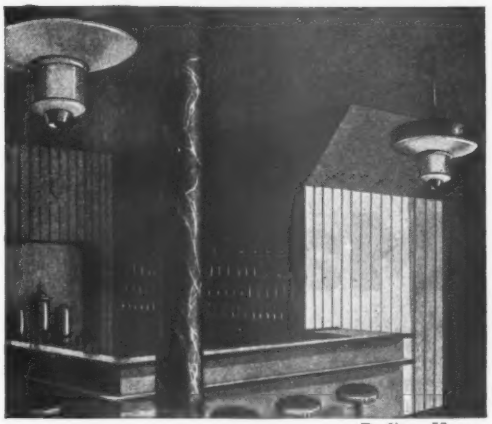

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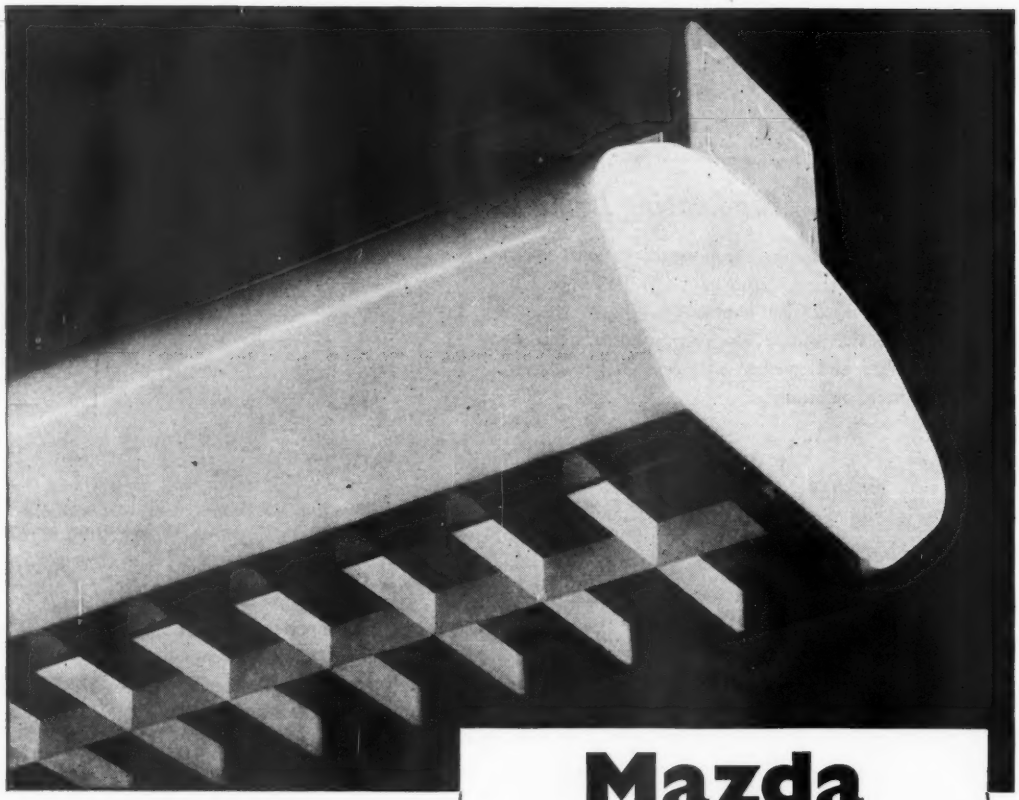

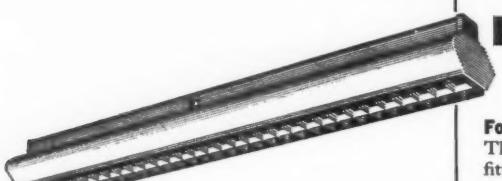

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Dustproof Louvers. Smooth opal diffuser with hermetically sealed clear dustproof louvers, giving a maximum of downward light.

Easy Maintenance. The diffuser is instantly removable over the lamps, or it may be released from either side to hang clear of the lamps, leaving them readily accessible for maintenance. There are no crevices where dirt can collect.

Whole diffuser unit in 'Perspex', free from drilling or riveting, totally enclosed and with a simple lift-and-engage attachment to channel.

Switch-start or Instant-start ready-wired BTH Lamp Auxiliary Gear; voltage-tapped chokes and BTH fixed lampholders with retractable lamping shields as standard equipment. 'Pendicone' cup-washer fixing for quick surface mounting.

Enhances the appearance of any room where it is installed — and the whole fitting is designed to provide the most efficient lighting with minimum maintenance.

Leaflet DL 9630-5 gives full details.

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Where tiling may have to resist frost, tiles made by the Carter plastic clay process should be used. These tiles have an open body which minimises the effect of the crystallisation of frozen water. Even under extreme conditions, such tiles have behaved well for half a century.

Carter exterior tiles have all the qualities of Carter interior tiles but with a surface texture similar to that of glazed faience. This distinctive appearance is sometimes preferred for certain interior uses also and the tiles are, of course, entirely suitable for use in this way when for reasons of colour or texture this is desired. Except for white and cream earthenware glazes, the colour range is the same as for interior tiles, but the plastic clay fires to a cream shade, and most colours, therefore, come out slightly darker than the Poole range of interior tiles which are made with a white body.

The sizes in which exterior tiles are made and the fittings which go with them vary slightly from the interior range. The Carter Exterior Tile Catalogue 3/2 should be referred to. It is also advisable to see samples especially when light colours or semi-transparent glossy colours are being considered.

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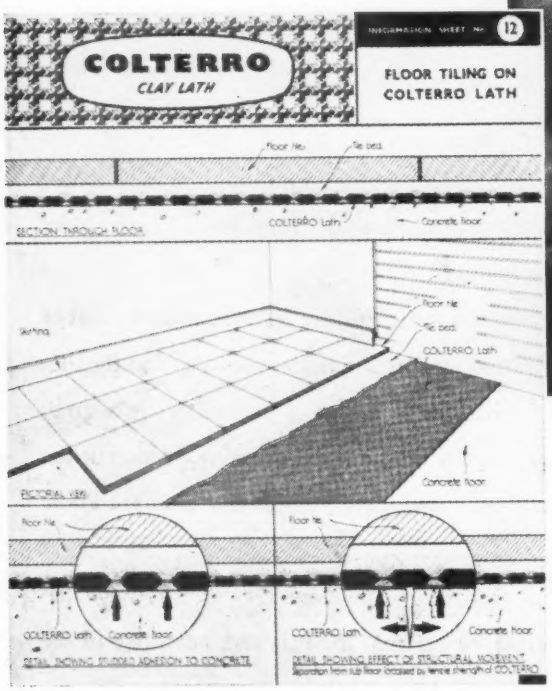

Only Colterro Lath will give him this confidence as it consolidates and reinforces the tile bed and allows a spotted adhesion to the sub-floor. This eliminates transference of structural cracks and excessive shrinkage of the bed itself.

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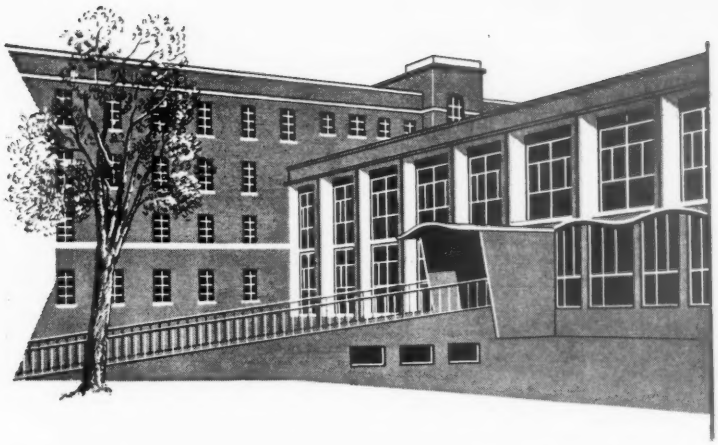

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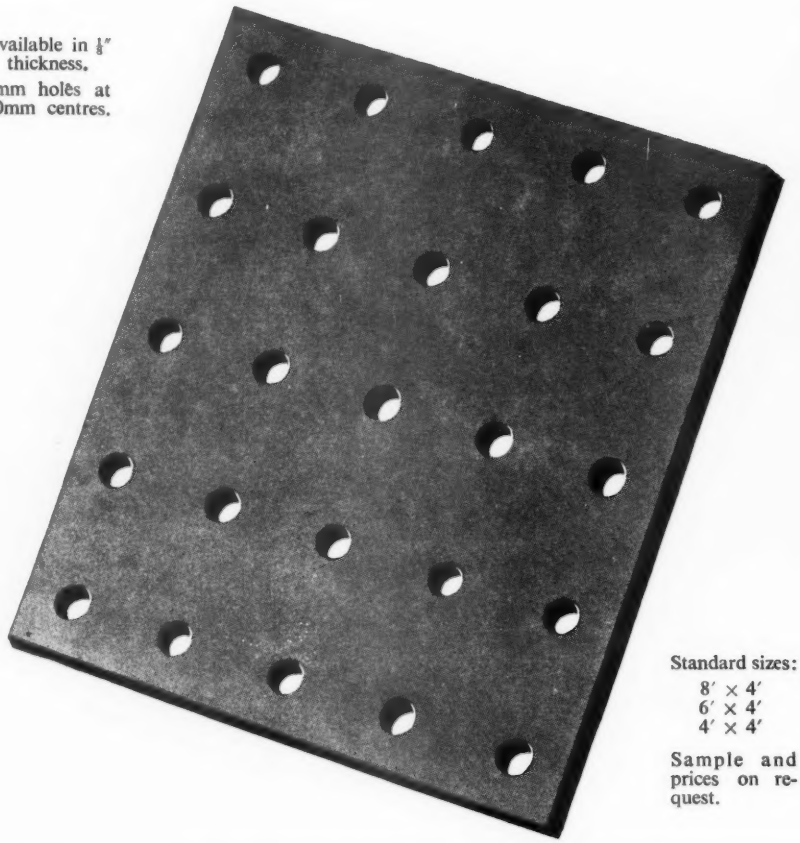

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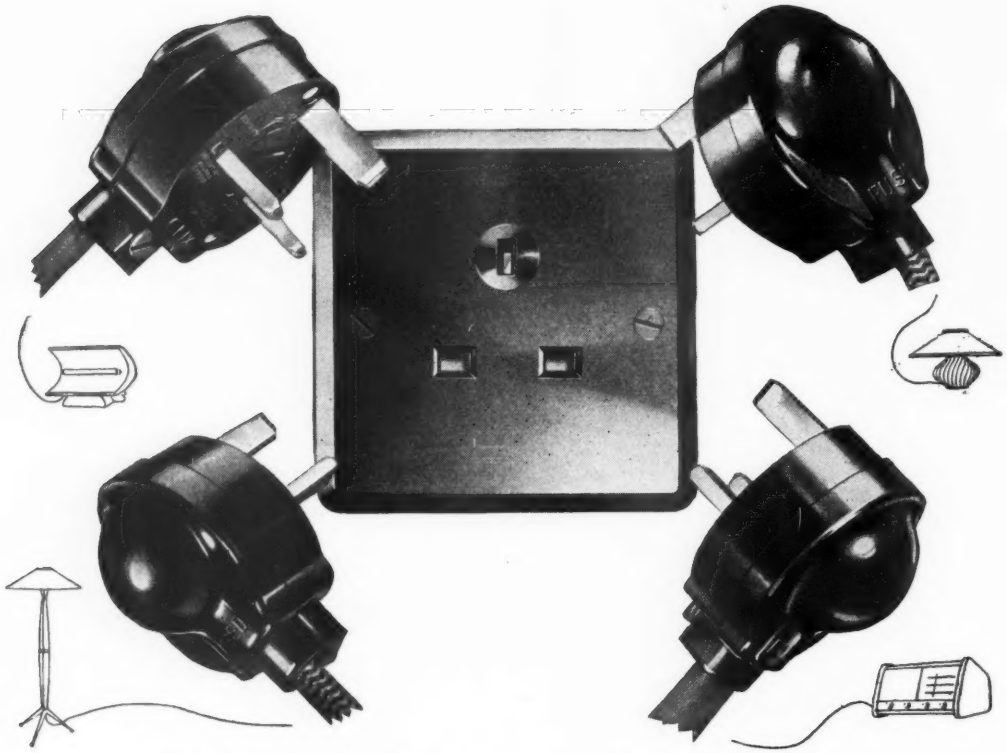

4 into 1 *won't* go...

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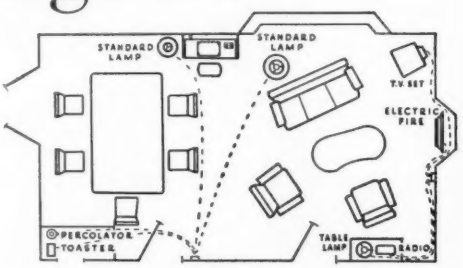
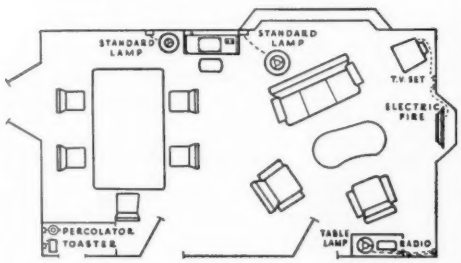
THE Windsor range of Ediswan Electrical Accessories includes all types of 13 amp. Socket Outlets, Switch Socket Outlets and rectangular pin fused Plugs required for normal installations—quality Accessories at competitive prices. Remember also that Ediswan manufacture a Plug which can be re-fused in 15 secs.



Insufficient socket outlets wrongly placed. Note the long trailing flexibles running dangerously across doorways and "traffic ways".



Correct arrangement of socket outlets. Long flexibles and inconvenient adaptors are avoided.

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E.37

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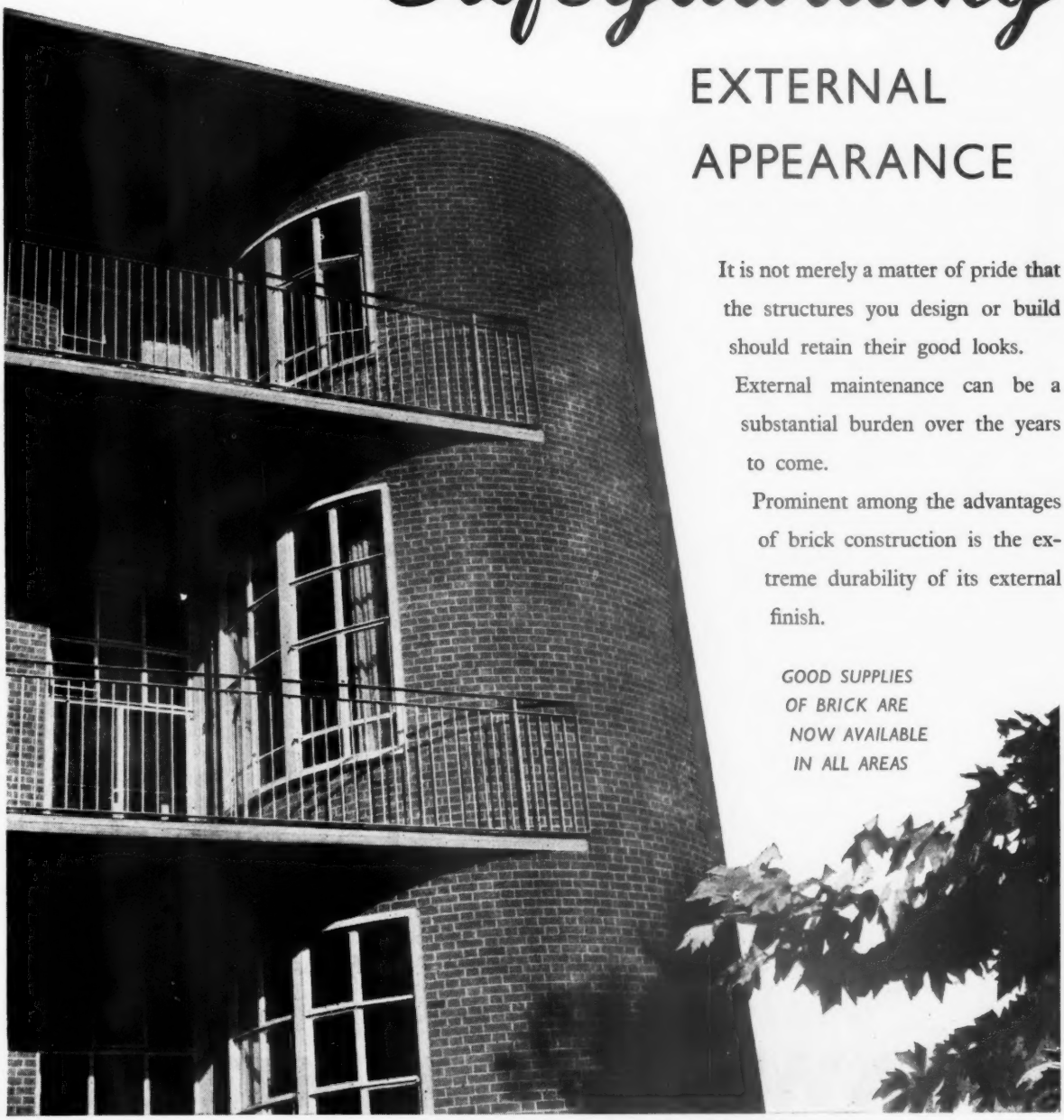

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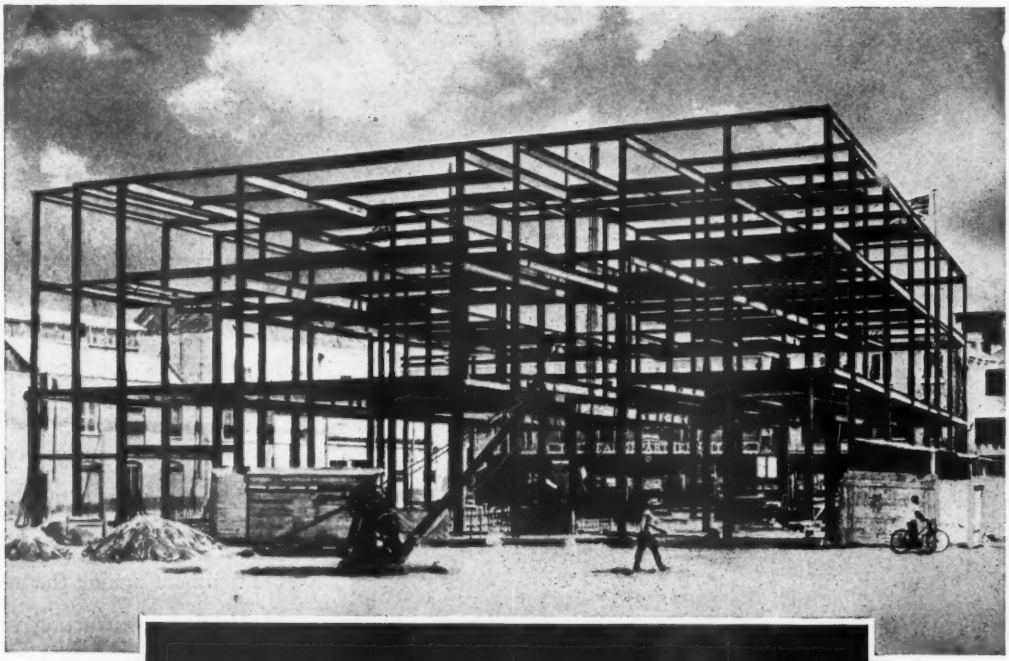

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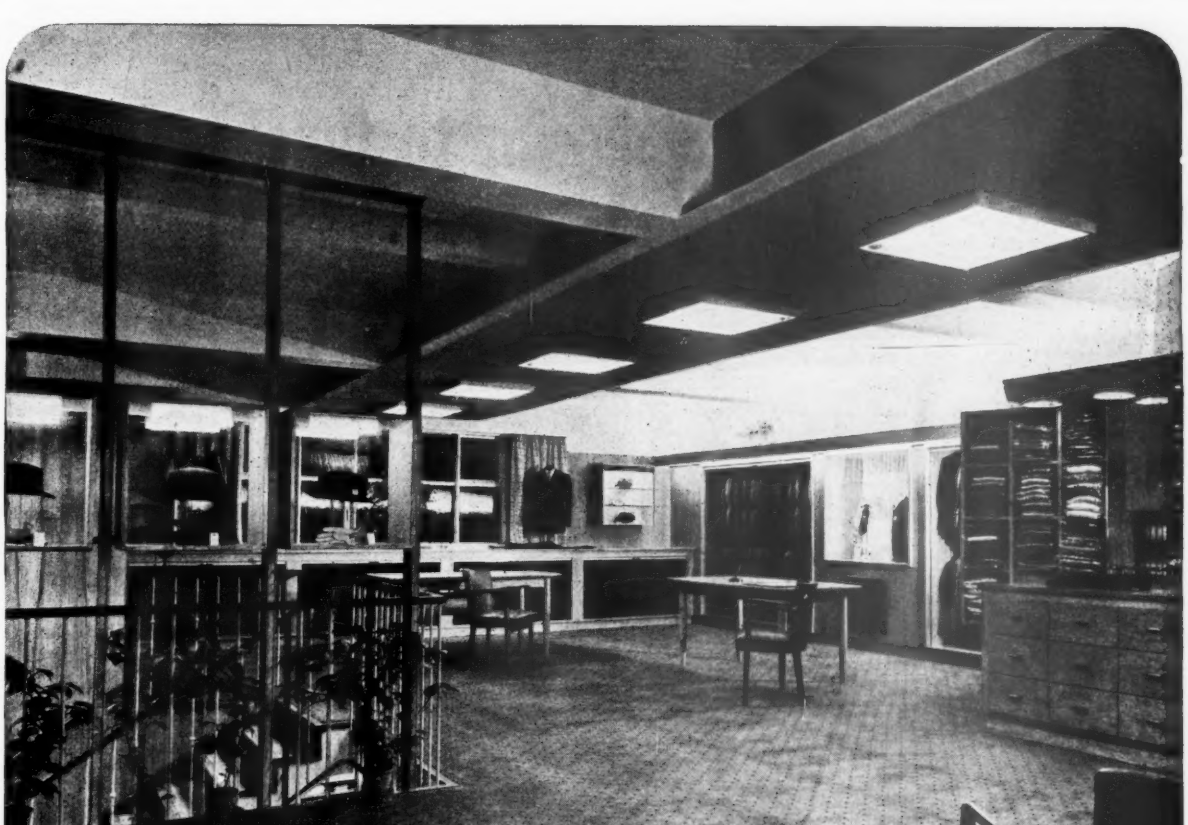

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Architects: Westwood, Sons & Harrison
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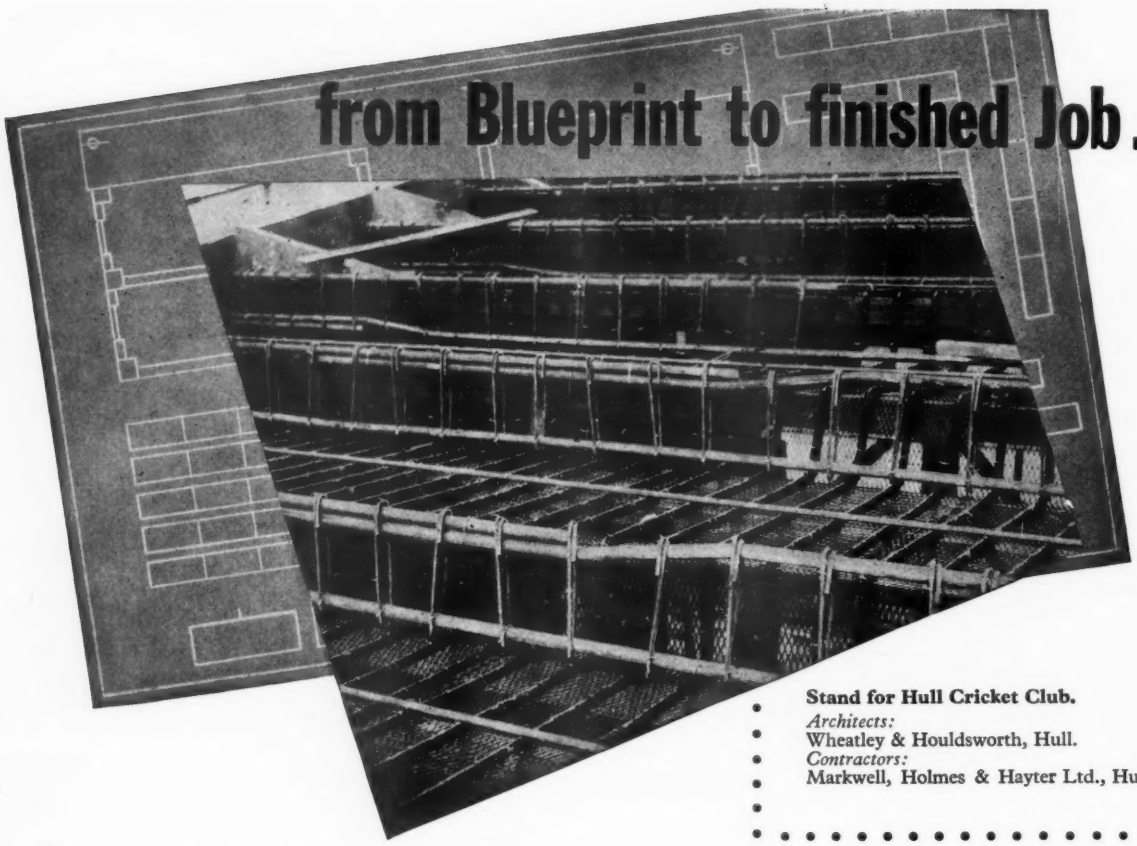

Stand for Hull Cricket Club.
Architects:
Wheatley & Houldsworth, Hull.
Contractors:
Markwell, Holmes & Hayter Ltd., Hull.

Photograph shows Ribmet as permanent centering and reinforcement; and mild Steel Bars and Stirrups in Risers. Expanded steel was used in the stanchion and pier encasement. The design for the reinforcement was supplied as part of our service.

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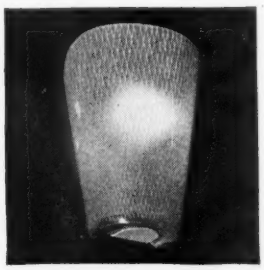

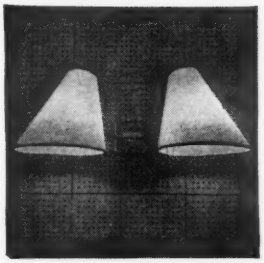

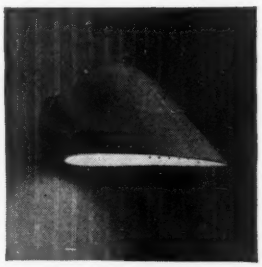

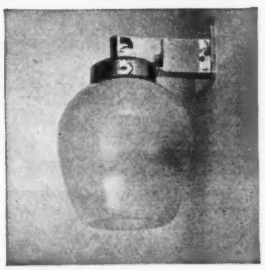

Wall Brackets

These are a few of the many brackets readily available from our standard ranges; in most instances there is a choice of shade assemblies and there are, of course, a variety of ceiling and pendant fittings which can be used in conjunction with these when desired.

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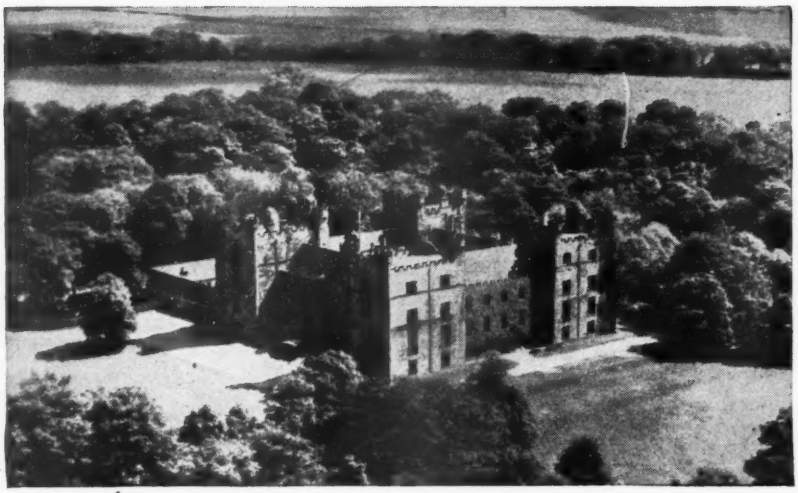

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Interior aspects of this historic building show how the discreet but effective use of modern materials can provide adequate protection and still be in harmony with the essentially dignified character of the famous interiors, designed by Sir John Vanbrugh in 1721.

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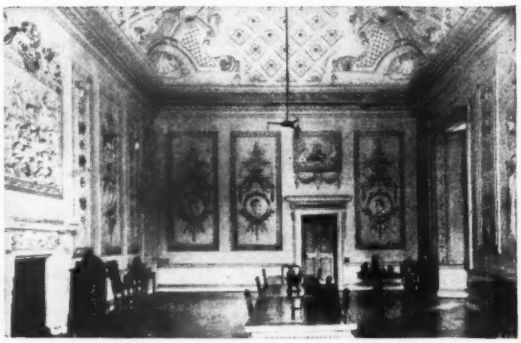

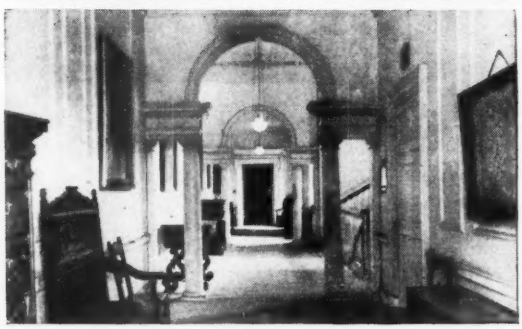

The Garter Room (above) and The Vanbrugh Corridor.

Decorated throughout with British Paints Limited materials by W. Curry Limited, Chester-le-Street, County Durham. The exterior photograph is by Aero Pictorial Limited.

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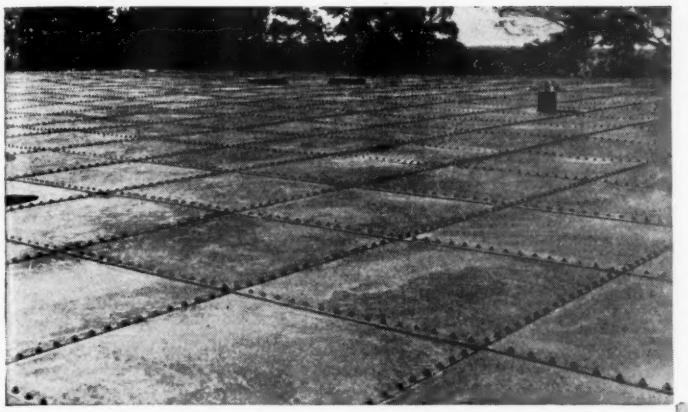

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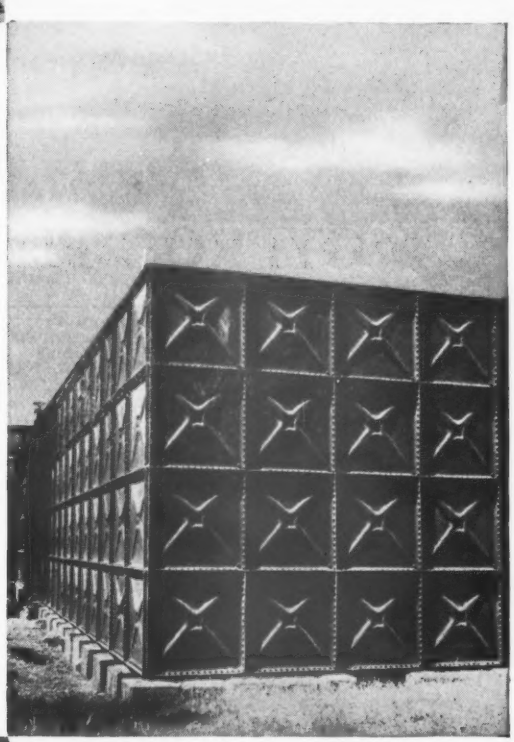

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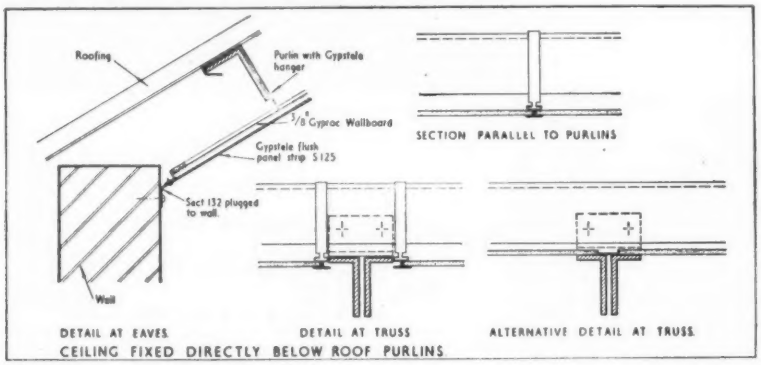
* These figures are calculated by the method described in the Ministry of Fuel and Power Efficiency Bulletin No. 12 "Thermal Insulation of Buildings".



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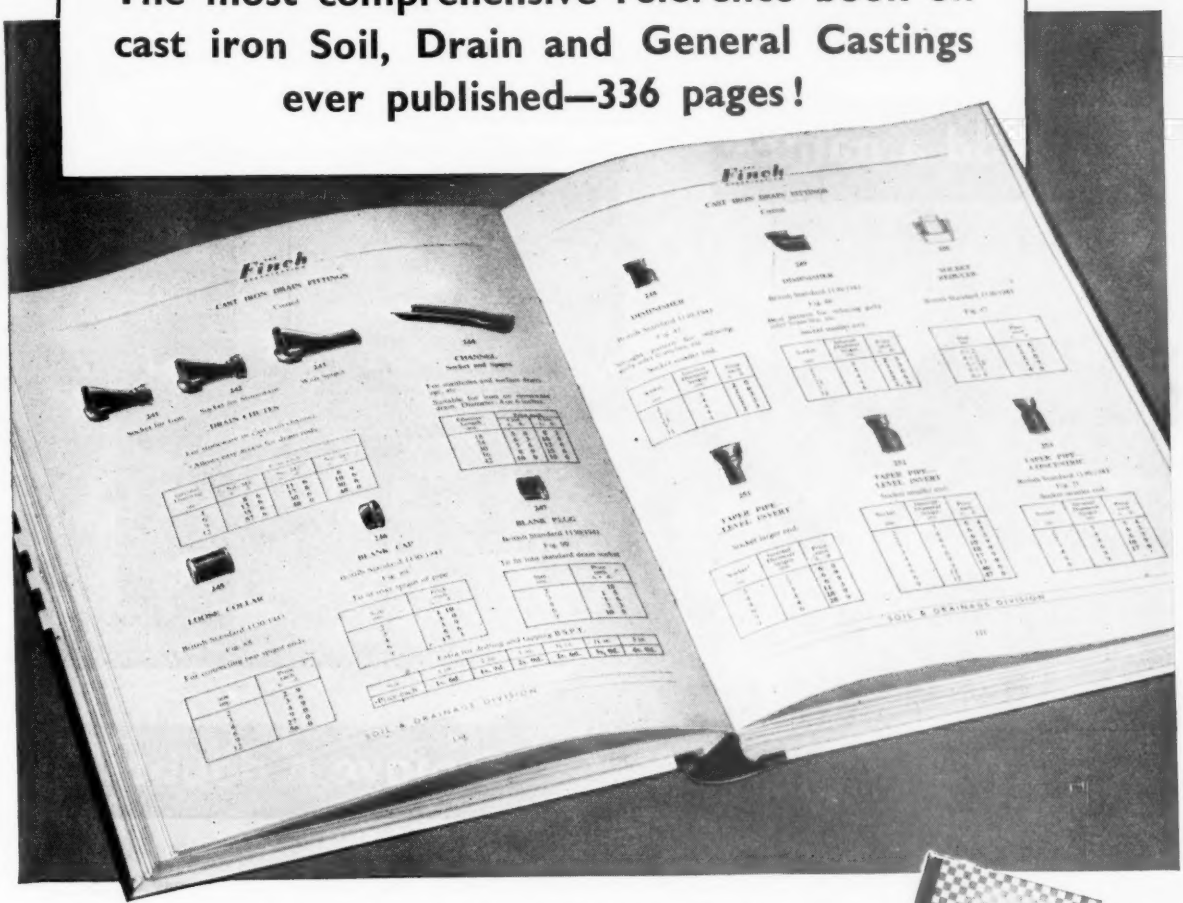

Finch's new catalogue of cast iron Soil, Drain and General Castings has been produced with micrometer accuracy; it will become an essential reference book for Architects, Surveyors, Builders and Plumbers.

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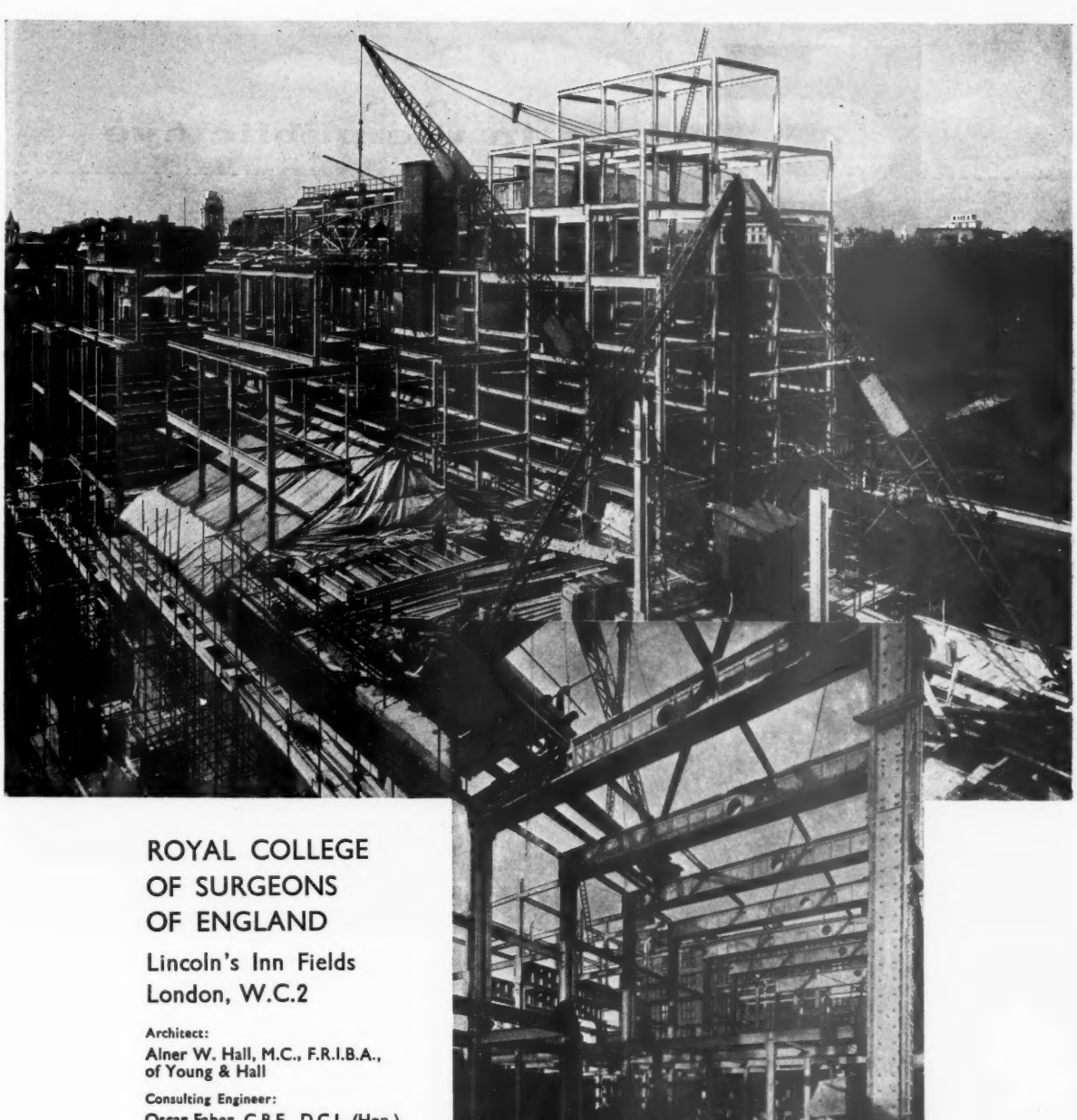

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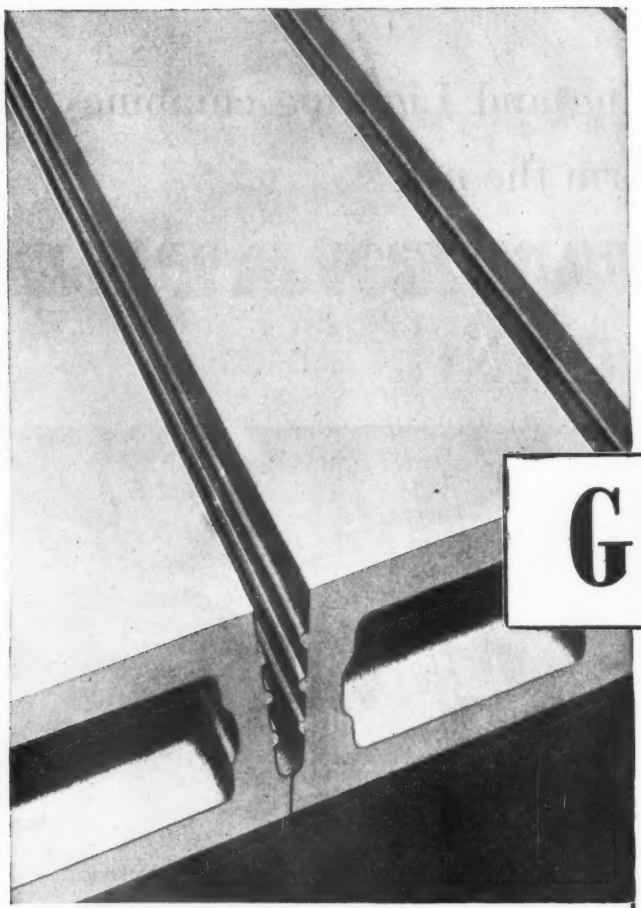

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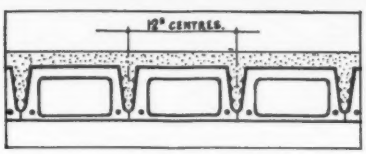

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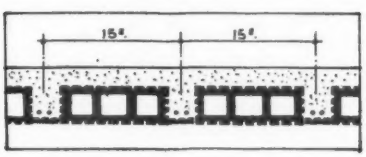

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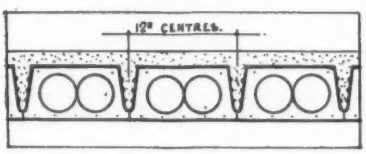

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Domelights in 'Perspex' Acrylic Sheet

for Infant School

Loughton. Debden, The Hereward County Infants' School, showing the lighting effect of domelights in 'Perspex'. Their light transmission is 92%. Domelights by W. J. Cox Ltd., Architect: H. Conolly, F.R.I.B.A. County Architect of Essex.

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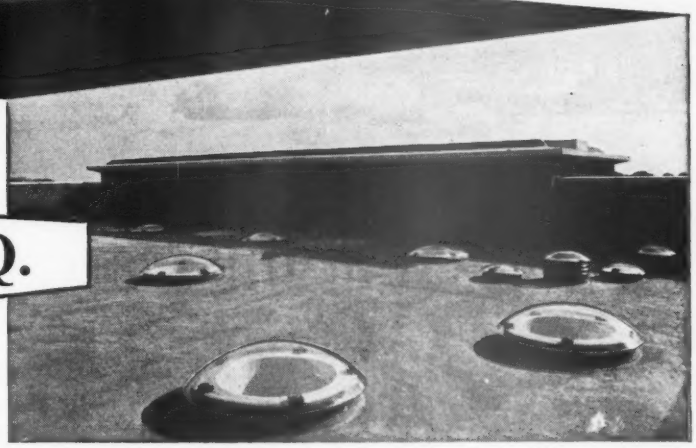

Non-corrosive, weather-resistant domelights in 'Perspex' on the roof of the 'Terylene' Council Headquarters, Harrogate. Domelights by W. J. Cox Ltd., 559 Holloway Road, N.19.

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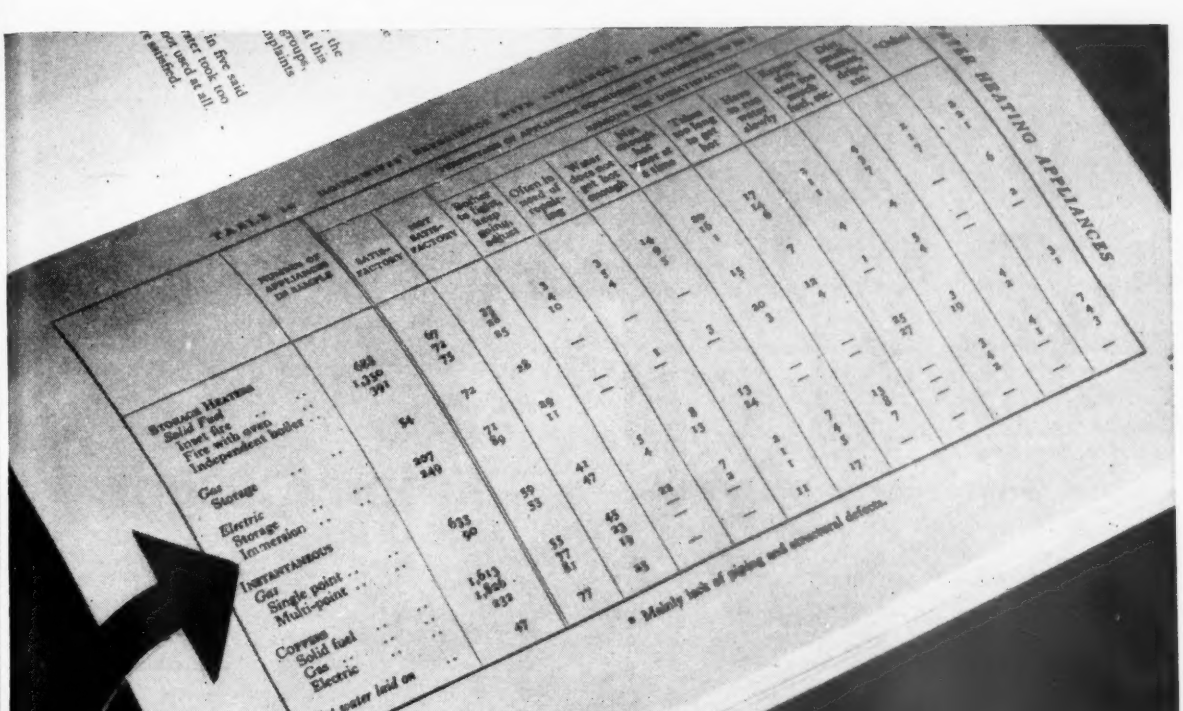

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* National Building Studies Special Report No. 8 "An Inquiry into Domestic Hot Water Supply in Great Britain" (H.M. Stationery Office)

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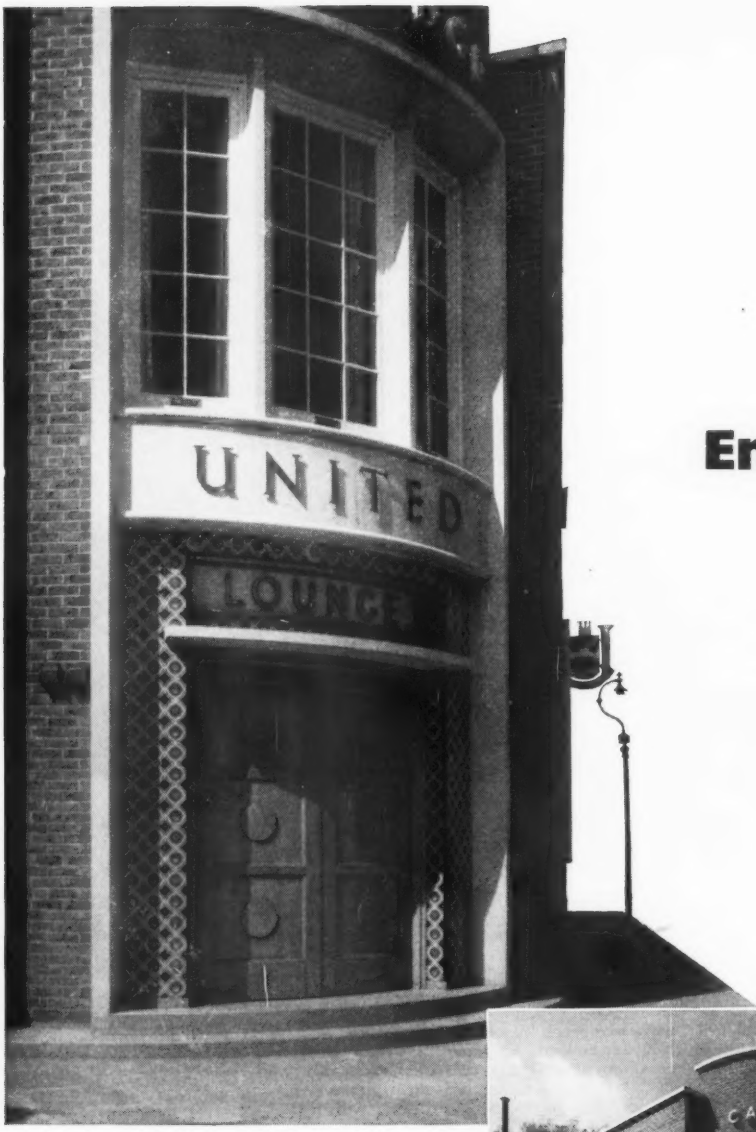

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THE CAMBRIDGE HOTEL, Southsea

Architect: K. Hornsey L.R.I.B.A.

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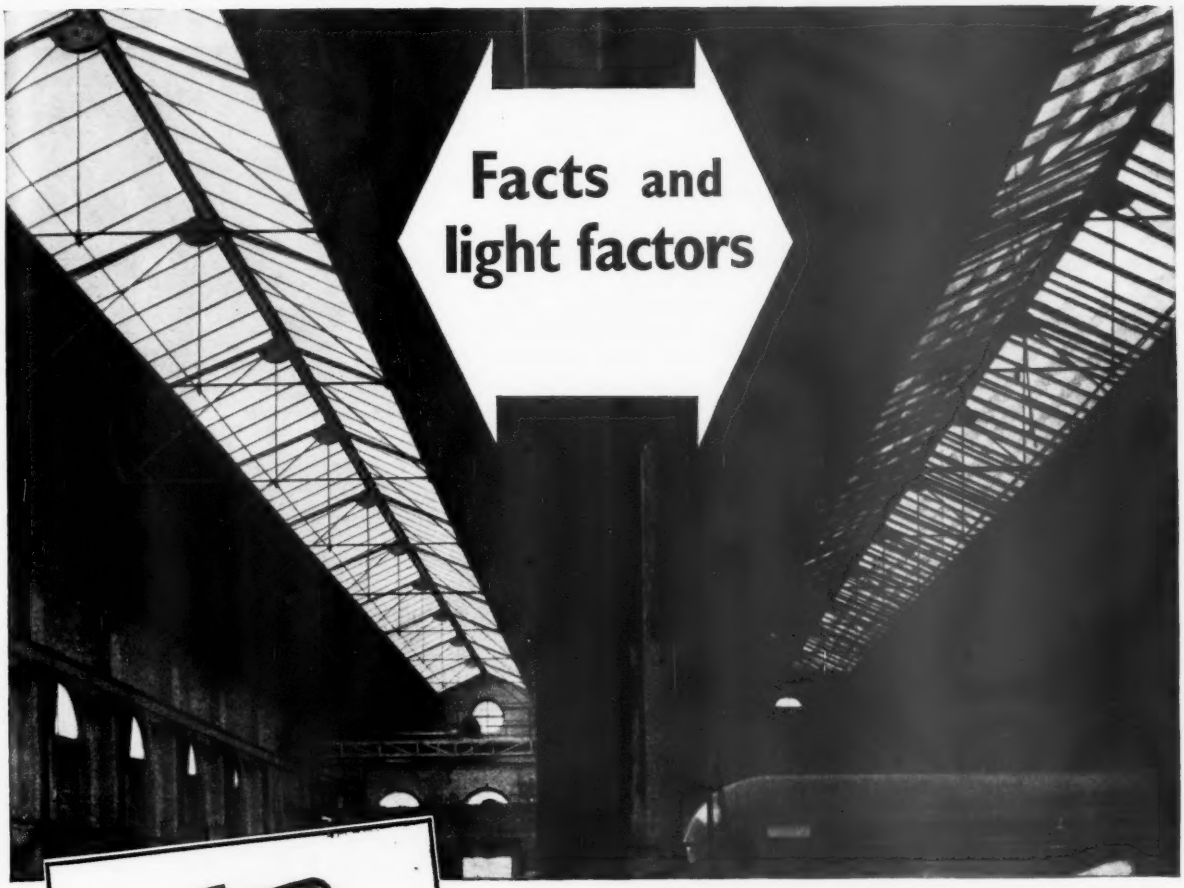
Facts and light factors



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C144 *Architects: Messrs. Ramsey, Murray & White, F/F/F.R.I.B.A. Consulting Engineers: Messrs. Scott & Wilson, Kirkpatrick & Partners*

B.E.A. Staff Catering Building at London Airport

The illustration shows the interior of the new staff catering building at the British European Airways London Airport Permanent Maintenance Base. The main restaurant with serveries, kitchens and stores is on the left. The building is of framed concrete construction in 12′0″ bays with 60′0″ span roof prestressed beams designed on the Lee-McCall system. The block flooring is treated with a plastic finish.

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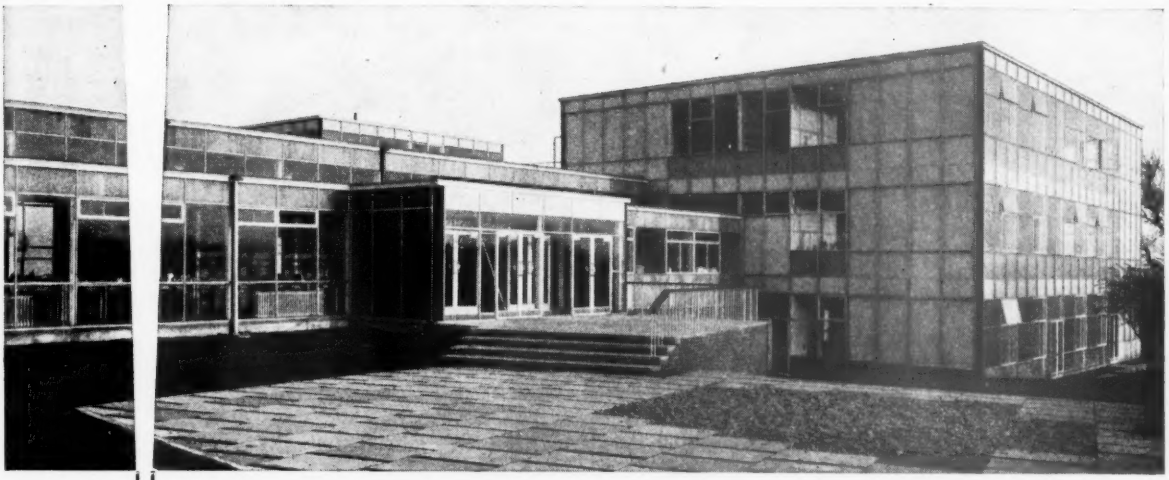
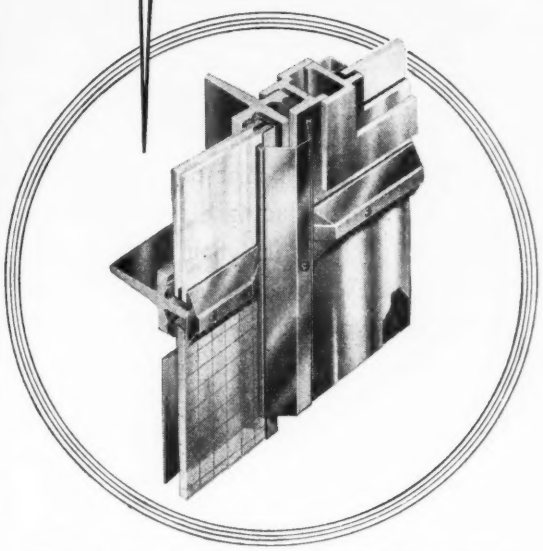


for HILLS GLASS CURTAIN WALLING



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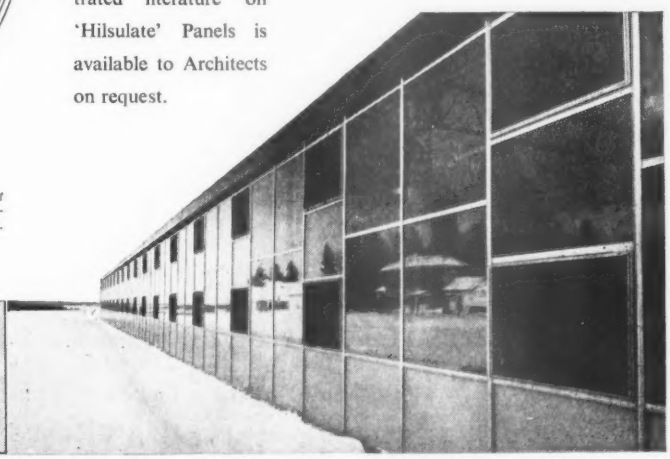
(Illustrated at top). Hurlfield Secondary Modern School for Girls, Sheffield. Architects Co-Partnership in collaboration with J. L. Womersley, A.R.I.B.A., A.M.P.T.I., City Architect.

(Right). The Wingham District High School, Toronto. Architects: Messrs. Kyles & Kyles.



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Council Election Results

Report to the Chairman of the General Meeting, Tuesday 14 June 1955

The Scrutineers appointed to count the votes for the election of the Council for the Session 1955–1956 *beg to report as follows:*

4,687 *valid envelopes were received—*771 *from Fellows,* 3,371 *from Associates and* 545 *from Licentiates.*

In addition 123 *envelopes were received which were invalid* (6 *unsigned,* 28 *unstamped,* 88 *too late,* 1 *unsealed and empty).*

The result of the election is as follows:

COUNCIL 1955–1956

President

CHARLES HERBERT ASLIN (Hertford) (unopposed)

Past-Presidents

SIR HOWARD ROBERTSON (unopposed)
SIR PERCY EDWARD THOMAS (Cardiff) (unopposed)

Members of Council

		Votes
Elected		
1.	EDWIN MAXWELL FRY	1,918
2.	JOHN MURRAY EASTON	1,627
3.	FRANCIS REGINALD STEVENS YORKE	1,620
4.	CECIL GEORGE STILLMAN	1,420
5.	EDWARD DAVID MILLS	1,406
6.	GORDON THOMAS TAIT	1,318
Not Elected		
7.	HUBERT BENNETT	1,277
8.	JOHN HENRY FORSHAW	1,196
9.	HAROLD CONOLLY	1,163
10.	HENRY THOMAS CADBURY-BROWN	1,125
11.	ERIC ALFRED LYONS	1,073
12.	THOMAS CECIL HOWITT	1,069
13.	STEPHEN ROWLAND PIERCE	929
14.	FREDERICK BERNARD POOLEY	872
15.	ARCHIBALD GEORGE JURY	827
16.	ALDWYN DOUGLAS JONES	815
17.	FREDERICK HAMER CROSSLEY	805
18.	PROFESSOR HENRY MYLES WRIGHT	757
19.	MARK HARTLAND THOMAS	634
20.	PHILIP GARLAND FAIRHURST	604
21.	GEORGE FAIRWEATHER	540
22.	STANLEY VINCENT GOODMAN	530
23.	ALEXANDER ROBERT FORDYCE ANDERSON	522
24.	FRANCIS JAMES MASSEY ORMROD	443
25.	TOM WILLIAM HAIRD	352
26.	THOMAS EUGENE NORTH	344
27.	CYRIL FRANCIS BATES	312
28.	LAWFORD RAYMOND GOWER	257
29.	ANTOINE ENGLEBERT GEENS	242

4,679 Voting Papers were received of which 16 were invalid.

Associate Members of Council

		Votes
Elected		
1.	PETER FAULKNER SHEPHEARD	2,372
2.	JOHN LEWIS WOMERSLEY	1,900
3.	TOM MELLOR	1,090
Not Elected		
4.	CHARLES H. PIKE	998
5.	LESLIE HUGH WILSON	933
6.	RICHARD LLEWELYN DAVIES	930
7.	NORMAN PERCY THOMAS	874
8.	JAMES GORDON WOOLLATT	773
9.	ALEXANDER STEELE	692
10.	JAMES THOMAS CASTLE	677
11.	ERNEST FRED SMITH	656
12.	ANTHONY DREW-EDWARDS	471
13.	RENE E. WILLIAM FER	391

4,602 Voting Papers were received of which 16 were invalid.

Licentiate Member of Council

		Votes
Elected		
1.	RICHARD WILLIAM TOMS	1,529
Not Elected		
2.	SIDNEY LUNN WHITEHOUSE	1,440
3.	W. NORMAN OLIVER	742

4,691 Voting Papers were received of which 10 were invalid.

Representatives of Allied Societies in the United Kingdom or the Republic of Ireland

(1) *Six Representatives from the Northern Province of England*

PROFESSOR WILFRID BYTHELL EDWARDS [F] (Northern Architectural Association)
JOSEPH GOMERSALL [L] (Manchester Society of Architects)
WILLIAM HARROWER GLEN DOBIE [F] (Liverpool Architectural Society)
HAROLD DENT PRIESTMAN [A] (York and East Yorkshire Architectural Society)
NORMAN HAROLD FOWLER [F] (West Yorkshire Society of Architects)
HARRY ARMITAGE HICKSON [F] (Sheffield, South Yorkshire and District Society of Architects and Surveyors)

(2) *Five Representatives from the Midland Province of England*

STANSFELD THOMAS WALKER [F] (Birmingham and Five Counties Architectural Association)
JOHN HUGH LLOYD OWEN [A] (Leicestershire and Rutland Society of Architects)
FREDERICK CHARLES LEVITT [L] (Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects)
WILLIAM CAPARNE BALDRY [L] (Nottingham, Derby and Lincoln Society of Architects)
HUMPHREY COLMAN BOARDMAN [A] (East Anglian Society of Architects)

(3) *Six Representatives from the Southern Province of England*

HERBERT FORREST WALLS [A] (Devon and Cornwall Society of Architects)
JOHN NELSON MEREDITH [F] (Wessex Federal Society of Architects)
ERIC STEWARD SMITH [F] (Berks, Bucks and Oxon Architectural Association)
JACK BERNARD BRANDT [F] (Hampshire and Isle of Wight Architectural Association)
CHARLES IREDALE HOBBIS [A] (Essex, Cambridge and Hertfordshire Society of Architects)
GRAHAM CRUMP [F] (South-Eastern Society of Architects)

(4) *Four Representatives of Allied Societies in Scotland to be nominated by the Council of the Royal Incorporation of Architects in Scotland.*

ALEXANDER ESME GORDON [A] (Edinburgh)
WILLIAM ARCHIBALD PARK JACK [F] (Glasgow)
WILLIAM MCCREA [F] (Glasgow)
One representative to be appointed.

(5) *One Representative of Allied Societies in Wales*

One representative to be nominated by the South Wales Institute of Architects.

(6) *Two Representatives of Allied Societies in Ireland*

HARRY STANLEY ROBSON [A] (Royal Institute of the Architects of Ireland)
REGINALD SHARMAN WILSHERE [F] (Royal Society of Ulster Architects.)

Representatives of Societies in Alliance with the Royal Institute Overseas

To be nominated (The Royal Architectural Institute of Canada)
To be nominated (Representative in the United Kingdom)
EDWARD JAMES ARCHIBALD WELLER [F] (Royal Australian Institute of Architects)
ANDREW GRAHAM HENDERSON [F] (Representative in the United Kingdom)
JACK IAN KING [F] (The New Zealand Institute of Architects)
REGINALD HAROLD UREN [F] (Representative in the United Kingdom)
WILLIAM ARCHY MACDONALD [F] (The Institute of South African Architects)
MICHAEL THEODORE WATERHOUSE [F] (Representative in the United Kingdom)
GAJNAN BABOORAO MHATRE [F] (The Indian Institute of Architects)
STUART BENTLEY [F] (Representative in the United Kingdom)

Representative of the Architectural Association (London)

BRYAN PERCY WESTWOOD [F]

Representative of the Association of Building Technicians

KENNETH JOHN CAMPBELL [A]

Chairman of the Board of Architectural Education

PHILIP GARFORTH FREEMAN [F]

Chairman of the R.I.B.A. Registration Committee

HOWARD VICARS LOBB [F]

Two Representatives of the R.I.B.A. Salaried and Official Architects' Committee

To be nominated

Chairman of the R.I.B.A. Allied Societies' Conference

FREDERICK CHARLES SAXON [F] (Chester)

Election of Two Honorary Auditors

EDWARD DOUGLAS LYONS [A]
JOHN RATCLIFFE [F]

Scrutineers

D. S. PEARCE	E. H. FIRMIN
SIDNEY H. FISK	GORDON STEELE
JOHN J. ADAMS	ARTHUR J. NORCLIFFE
F. S. ALEXANDER	E. TOM SARGENT
NORMAN RIX	R. E. SUMMERS
R. HARDY	FRANCIS KERR
MAURICE RUSSELL	F. M. SELLEY
D. MURRAY EVANS	W. A. SHERRINGTON
R. G. D. VERNON	M. C. GRAY
M. V. F. POORE	JAMES C. KENNEDY
THOMAS SIBTHORP	

ERNEST G. ALLEN, *Chairman*

9 June 1955

R.I.B.A. Officers 1955–56

At the Meeting of the Council held on 5 July, Mr. Kenneth M. B. Cross, M.A.(Cantab.) (London), and Dr. J. Leslie Martin, M.A., Ph.D. (Manchester) (London), were appointed Vice-Presidents, and Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A. (Edinburgh), was re-appointed a Vice-President. Mr. F. C. Saxon, M.C. (Chester), Chairman of the Allied Societies Conference, is also a Vice-President. Mr. E. D. Jefferiss Mathews, O.B.E. (London), was appointed Hon. Secretary and Mr. Thomas E. Scott, C.B.E. (London), was re-appointed Hon. Treasurer.

R.I.B.A. London Architecture Bronze Medal for 1954

The Jury have made their award in favour of the Ackroydon Estate, Wandsworth, designed by the Architect to the London County Council.

R.I.B.A. Architecture Bronze Medal: The Essex, Cambridge and Hertfordshire Society of Architects

The award for the three year period ending 31 December 1954 in the area of the Essex, Cambridge and Hertfordshire Society has been made in favour of the Harrowfield Boys Secondary School, Harold Hill, Essex, designed by Richard Sheppard and Partners (Richard Sheppard [F], Jean Shufflebotham [A] and Geoffrey Robson [A]).

Birthday Honours List

C.H. Henry Moore [*Hon. A*].

Knight Bachelor. G. H. Banwell, Secretary, Association of Municipal Corporations. Benjamin Ifor Evans, D.Lit., Provost, University College, London, and member of the Board of Architectural Education.

K.B.E. Sir George Burt.

C.B.E. John Brown, M.C., LL.D., Education Officer L.C.C. and member of the Board of Architectural Education. Professor K. A. C. Creswell [*Hon. A*]. C. G. Mant [*F*], Director-General, Ministry of Works. Raymond Mortimer, Past Member, London Architecture Bronze Medal Jury. J. B. Ward Perkins, Director of British School at Rome. J. Cassels Pinkerton, Past President R.I.C.S. Lister P. Rees [*A*].

O.B.E. Lieut.-Colonel P. J. Barbary, G.M., T.D. [*A*].

M.B.E. A. M. Petrie [*L*].

Review of the Architects (Registration) Acts

On 15 June 1954 the Council appointed a committee of seven members under the chairmanship of Mr. Kenneth M. B. Cross, Honorary Secretary, with the task of obtaining information as to the legislative position in other countries and reviewing the present position in the United Kingdom, with the object of considering whether it was now both opportune and practicable to take definite steps towards further implementation of the Architects (Registration) Acts.

The Committee have carried out their task and have made their report to the Council. It is clear from the Committee's review of the position in other countries that any extensive implementation of the Acts amounting to restricting the right to design all buildings to architects only would be much in advance of the world situation.

The Committee also considered the situation within the United Kingdom in regard to the various interests that would be affected and the procedure that would be required to obtain legislative action.

In view of these considerations, the Committee were convinced that the time is not as yet ripe for such a move. The Council approved the findings of the Committee, but in so doing they have not in any way departed from their ultimate policy of further implementation of the Architects (Registration) Acts.

The Submission of Unsatisfactory Plans for Planning Approval

The Council have considered a report from the Allied Societies' Conference on the treatment by officers of planning authorities of plans submitted by unqualified persons which prove unacceptable. It is said that many Planning Officers, especially those who are qualified architects, in their desire to be of assistance to the public, are tempted to go beyond what might be thought the limits of their duty by re-designing and re-drawing the plans which they then return to the applicant with the grant of planning approval.

In the minds of the Council, the following considerations are of importance. If building owners are encouraged to rely upon the free services of public authorities which they have no statutory right to enjoy it means that there will be that much less work for qualified architects. Secondly, it is open to question whether it is proper for an architect, a member of an office which itself has to exercise a judicial function in approving or rejecting plans, to reformulate a plan and give it the approval of that office.

The Council therefore take the view that Planning Officers should limit themselves to constructive criticism of unsuitable schemes, but falling short of the free provision of drawings from which buildings can be constructed. Those who submit unsuitable schemes ought to be advised to consult a qualified architect. It is hoped that members of advisory panels and others whose activities bring them into contact with the machinery of planning approval will make these views known.

Representation of Salaried Members

In accordance with the desire expressed by resolution at the Annual General Meeting, the Council have reviewed the conclusions reached following on the work of the Salaried and Official Architects' Committee.

It has been decided to appoint a Committee on which members in the following spheres of activity will be represented: principals in private practice, salaried assistants in private practice, official architects, salaried assistants in Central and Local Government service, teachers and heads of architectural departments of industrial or commercial organisations. The task of this Committee will be two-fold. Firstly, as a matter of urgency, to carry out a review of the whole study already given to the problem and to suggest to the Council what measures might be put into effect to meet the expression of opinion at the Annual General Meeting. Secondly, to consider the advantages of, and, if thought fit, draw up a programme of work for an extended investigation into the structure of the profession, the total income of the profession in relation to the scale of salaries that might be afforded, and the grading of architectural appointments in relation to age, experience and responsibilities, and to make recommendations to the Council for the further pursuit of this investigation.

A Century of Architectural Practice

On Monday 6 June a large and representative gathering of office staff, past and present, together with professional connections, clients, builders, sub-contractors and members of the family of the architectural firm of Waterhouse and Ripley celebrated, at a party given at the R.I.B.A., one hundred years of the practice of architecture by the Waterhouse family.

Alfred Waterhouse began the practice in Manchester, his home city, where his ability quickly gained recognition when in 1859 he won the competition for the Assize Courts. In 1863 he moved to London to work on the competition for the Law Courts and on other important buildings such as the Natural History Museum. In 1869, his father, Alfred Waterhouse senior, having come to live at Whiteknights Park, Reading, he built for himself the house Fox Hill in a corner of the park. In 1877 he bought Yattendon Manor and Estate and two years later built Yattendon Court to be his home.

Admitted Associate of the Royal Academy in 1878 and made R.A. in 1885, he was President of the R.I.B.A. 1888–91. No. 20 New Cavendish Street was both office and London home until 1901. He died in 1905.

Paul Waterhouse, the eldest son, who had joined his father's office in 1884, continued the practice and was President R.I.B.A. 1921–23. His office was at Staple Inn Buildings, High Holborn.

Michael Waterhouse, the only son of Paul and the present head of the firm, joined his father in 1919. After the death of his father in 1924 and the sale of the Yattendon Court Estate to Lord Iliffe he made The Manor House, Yattendon, his home, the office still being at Staple Inn Buildings.

In 1927 he took into partnership Cedric Ripley, with whom he had a firm bond of friendship dating from their pre-war student days. Together they continue the practice today; in 1948–50 Michael Waterhouse was, as his father and grandfather before him, President of the R.I.B.A.

David, the only son of Michael Waterhouse, began his architectural training after serving through the second world war and joined the office in 1953, the fourth generation to carry on the tradition of architecture in the family.

The Library Group

At the R.I.B.A. Library Group Annual General Meeting on 27 June the following officers were re-elected: as Chairman, John Summerson, C.B.E., F.S.A. [*A*]; as Hon. Secretary, Kenneth S. Mills [*A*]; as Hon. Treasurer, W. H. Allen [*A*].

The High Flats Report

Copies of the full report of the Symposium on High Flats, held last February, are now available. The report we published in the JOURNAL was of necessity considerably condensed and the number of illustrations restricted. The full report is verbatim and the great majority of the slides shown by the lecturers are reproduced. It has a special preface written by Dr. J. L. Martin [*F*], Architect to the London County Council.

In the absence of any authoritative book on the subject written for British readers and in accordance with British housing policy, this report is virtually the only comprehensive publication covering the subject as it applies to this country. Most of the papers were contributed by architects and engineers who have had personal experience in building high flats; there were also papers by a builder, a scientist, a fire-expert and a sociologist. The report consequently covers all the relevant aspects of what is a comparatively new technical problem for the architectural profession. It is also likely to interest members of housing authorities who have to understand in some detail the social and economic problems which high flats involve. Architects of the larger local authorities are therefore asked to make known this report to the members of their committees.

Copies are obtainable from the Secretary, the R.I.B.A.; price 6*s*.; by post, 6*s*. 6*d*. Cheques and postal orders should accompany applications for copies. Early application is advisable.

Apprenticeship Exhibition at the Building Centre

On 30 June the Minister of Works, the Rt. Hon. Nigel Birch, O.B.E., M.P., opened an exhibition organised by the Building Centre in collaboration with the Ministry of Works, the L.M.B.A. and the heads of building schools in the London area. The object is to interest boys of school-leaving age in the various building crafts and to this end the attention of all heads of secondary schools has been drawn to the exhibition, and arrangements are being made for parties of boys to visit it.

At the moment there are at least 300 vacancies for apprentices in the London area, and the L.M.B.A. estimate that 2,000 boys a year are needed as apprentices, the shortage being especially marked in the crafts of masonry, plastering, painting and decorating.

The exhibition comprises examples of work done by apprentices in the London area who are also being trained in one of the building schools in their district, and the exhibits are of a high standard, particularly in the masonry and carpentry and joinery sections. A clever and amusing paper cut-out shows the rungs by which an apprentice can rise through the various departments of the industry to reach the sublime height of managing director or principal through the sub-sublime position of general manager, and as a subtle spur to those apprentices whose craftsmanship ambitions are not entirely unleavened by financial considerations, the managing director or principal is shown as enjoying a cigar, whereas the general manager can only run to a cigarette.

The exhibition will remain open until 30 September and should be visited by those who are anxious to see the present standards of craftsmanship raised, because if apprentices can produce work such as was shown in the exhibition the prospect of what they will achieve with experience and practice is indeed encouraging. The work reflects the high standard of training in technical schools.

Library Closing

The Reference Library will be closed throughout August. During August the Loan Library will open from 12 noon to 2 p.m. on Mondays to Fridays inclusive and on Saturdays from 12 noon to 1 p.m., but not at any other time. All sections of the Library will be open as usual from 1 September but will close at 2 p.m. on Saturdays during September only.

A Presidential Jewel

We illustrate here the new Presidential jewel of the Federation of Malaya Society of Architects. It is of silver gilt and enamel, bearing the name and badge of the Society and the year of founding. In the centre panel is the Malay text 'Dibena dengan benar' which translated means 'Build in truth'. Surrounding the centre panel are eleven stars representing the eleven states and settlements comprising the Federation. Superimposed on the badge is a pair of dividers symbolic of the profession of architecture with, in the inset panel, brickwork to represent the craft of building. The ribbon is blue. The jewel was the result of a competition in the Society.

The President, Mr. V. S. van Langenberg [*L*], wore the jewel for the first time at the recent annual dinner of the Society.

R.I.B.A. Exhibition of Theatrical Designs

In connection with the International Conference on Theatre History which was organised by the Society for Theatre Research from 17 to 23 July, the R.I.B.A. is staging a small display of Designs for Theatres and Theatrical Settings chiefly from material in its Library collection. This will include original drawings by Inigo Jones, the Galli-Bibiena family, G. S. Repton, Benjamin Wyatt and sketches of classical theatres and English, French and Italian engravings. We reproduce one of the drawings on the cover of this JOURNAL.

Material from other sources will include: The Farnese Theatre, Vanvitelli's original drawings for the theatre in the Palace of Caserta, and other material kindly lent by Mr. Edward Craig; a model, drawings and photographs of the designs for a theatre for The Questors, illustrating its adaptability to five different kinds of stage; a model of the Georgian Theatre at King's Lynn lent by St. George's Art Trust of King's Lynn; illustrations of the reconstruction of the Georgian Theatre at Richmond, Yorkshire, to the designs of Richard Leacroft [*A*].

The exhibition which was opened at the R.I.B.A. on Monday 18 July will be on view until Saturday 30 July (Mondays–Fridays 10–7; Saturdays 10–5).

The Council Elections

At the General Meeting on 14 June, when the results of voting for the Council were announced, Mr. E. G. Allen [*F*], Chairman of the Scrutineers, said that the proportion of votes (4,687) to members (16,300) was the lowest for many years. No less than 123 papers were invalid. Mr. Allen emphasised that nothing but the voting paper must be enclosed in the envelope. Also, erasures disqualified a voting paper; if a member thought he had spoilt his paper he should return it to the Secretary R.I.B.A. and ask for another; writing to Mr. Allen himself was useless because the envelope was not opened until the day the votes were counted.

The British Architects' Conference 1955 Harrogate, 8, 9 and 10 June

AFTER the remarkable success of the Torquay Conference there were some who thought that so high a standard might not easily be attained again. They have been proved wrong by an attendance at this year's Harrogate Conference of 750 members (in spite of the railway strike) and by discussions of sustained interest which ended with a queue of would-be speakers for whom there was no time left. The social functions—the civic reception in the Royal Hall and the conference dinner in the Majestic Hotel—were lively and enjoyable; only the garden party at Harewood House was somewhat below standard, the day being cold, cloudy and draughty. Yorkshire cannot easily go wrong in the matter of architectural tours and the Tours Sub-Committee grasped their opportunities well. The organisation was so good as to be unnoticeable; all functions started and ended to time and members who arrived late were accommodated quickly.

The principal credit for the success of the Conference undoubtedly goes to Sir Thomas Bennett, K.B.E. [*F*], and Mr. David Woodbine Parish, with Mr. Alwyn Sheppard Fidler [*F*] and Mr. George Grenfell Baines [*A*] as runners up. They set the discussion in the first place at a high level, diagnosing one by one the weaknesses of the present organisation of the industry and suggesting remedies. There seemed to be a general consensus of opinion, not only among the four chief speakers but in the body of the hall, that there was very considerable room for improvement; and there appeared to be an equal willingness to co-operate with other sections of the industry in making that improvement. All members are strongly advised to read the papers (published in the June JOURNAL) and the report of the discussion because the subject is of great importance to all architects, whether salaried or in private practice, teachers or assistants. Some members of the conference were heard to say afterwards that the discussion became rather too diffuse, covering as it did a very wide range of subjects. Perhaps if this conference is considered as a first examination of an admittedly complex matter, that is an advantage rather than a fault. It has provided numerous points for detailed examination by the Council and Committees, and particularly by the Joint Consultative Committee of Architects, Quantity Surveyors and Builders.

Apart from the contribution made by the speakers and members themselves, the chief credit for the success of the Conference goes to the West Yorkshire Society of Architects, in particular to their President, Mr. Hubert Bennett [*F*]. Organising a Conference involves far more work than the members attending it can imagine. The Conference Executive Committee and its five sub-committees deserve the warmest thanks of all who attended. While it is perhaps invidious to mention the names of individuals when so many contributed, special thanks are due to Mr. W. H. King [*F*] and Mr. R. S. Shapley [*F*], the Joint Hon. Secretaries, and to Mr. F. Chippindale [*F*] and his sub-committee for the remarkably interesting exhibition, Mr. A. W. Glover [*F*] and his sub-committee for the smooth organisation of the tours, to Mr. Geoffrey A. Rowe [*A*] and his sub-committee for the Conference handbook and to Mr. Noel Pyman [*F*] and his sub-committee for the unglamorous work on accommodation and functions.

Among overseas guests were Mr. Frank Heath [*A*] of Melbourne who brought a message from the Royal Victorian Institute of Architects, Mr. and Mrs. Oswald V. Chisholm and Mr. Cyril J. Stephen [*A*] of Western Australia, Mr. and Mrs. John S. Gifford of Pennsylvania, U.S.A., and Mr. and Mrs. Chester Root of California, U.S.A.

Mr. A. G. Sheppard Fidler [*F*], City Architect, Birmingham, and Mr. R. A. H. Livett, O.B.E. [*A*], City Architect, Leeds, at the Informal Reception

Mr. J. H. Forshaw, C.B., M.C. [*F*], Chief Architect, Ministry of Housing and Local Government

Mr. and Mrs. George Grenfell Baines at the Civic Reception

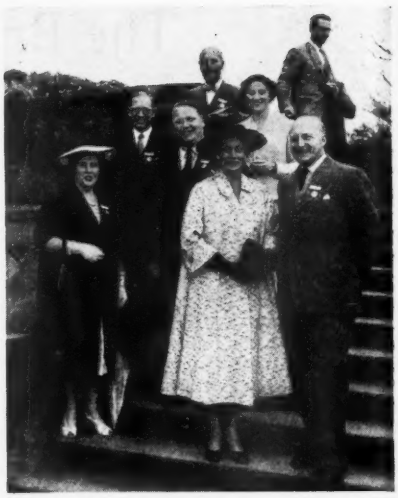
Mr. Howard V. Lobb, C.B.E. [*F*], at the Informal Reception

Mr. C. W. C. Needham, F.S.A. [*F*]

Mr. J. Nelson Meredith [*F*], City Architect of Bristol, President of the Bristol and Somerset Society of Architects, and Mrs. Meredith

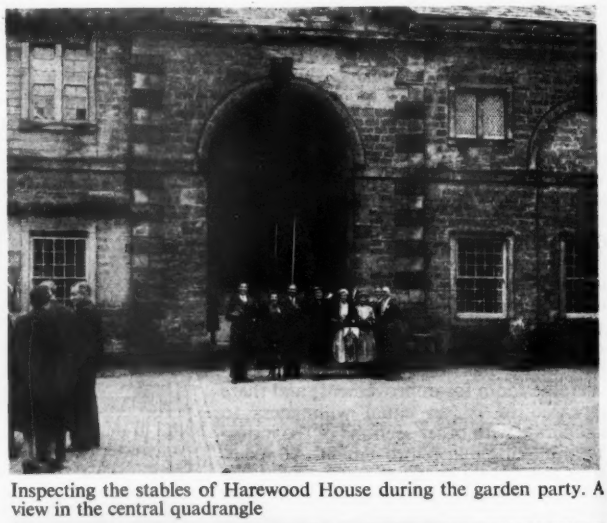
Mr. Hubert Bennett [*F*], President of the West Yorkshire Society of Architects, Mrs. Bennett and Helen at Harewood House

Mrs. C. H. Aslin and Mrs. Hubert Bennett, the wives of the two Presidents at the reception before the Conference dinner



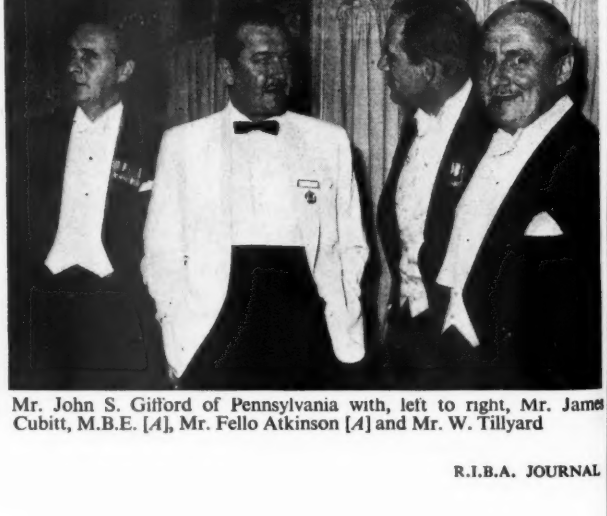
At Harewood House. Mr. H. G. Coulter [*F*], and Mrs. Coulter. Dr. W. A. Singleton [*A*] and Mrs. Singleton. Mr. T. M. Alexander [*F*], Mr. L. W. M. Alexander [*A*] and Mrs. Alexander

At the Civic Reception in the Royal Hall. Mrs. Aslin, Miss G. M. J. Taylor [*F*] (Mrs. R. A. Gerrard), the Mayor and the Mayor's Chaplain



Inspecting the stables of Harewood House during the garden party. A view in the central quadrangle

Mr. A. Graham Henderson, R.S.A., Mr. C. D. Spragg, C.B.E., Mrs. Henderson and Mrs. Fidler, Mr. Spragg's sister



Mr. John S. Gifford of Pennsylvania with, left to right, Mr. James Cubitt, M.B.E. [*A*], Mr. Fello Atkinson [*A*] and Mr. W. Tillyard

President's Inaugural Address

In the Royal Hall, Thursday 9 June

The Mayor of Harrogate, Councillor Robert J. Riley, had to perform, he said, the pleasant duty of extending not only a civic but a civil welcome to the Conference. The town appreciated the importance to them of conferences, especially such an important one as that of the British Architects. He drew delegates' attention to the exhibition of work by Harrogate artists which was on view and which had been got together specially for the Conference.

The President, Mr. C. H. Aslin, C.B.E.

First of all I must thank His Worship the Mayor most warmly not only on my own behalf, but on behalf of all our members and guests for the generous welcome he has extended to us this morning. It is 18 years since we were the guests of the West Yorkshire Society of Architects when our Conference was held in Leeds. That Conference was a great success, as I am sure this will be. The President of the host Society at that time was a great individualist, the late George Atkinson, whom the older of you will remember, and the Conference Secretary was a young man named Harold Conolly whom you will see here in a slightly different guise as County Architect of Essex, Vice-Chairman of the Allied Societies' Conference and a close neighbour of mine since our two counties adjoin. Previous to that, in 1929 we had a delightful Conference in the ancient and historic City of York when the York and East Yorkshire Society entertained us. To many of us it is coming home to forgather in this county of broad acres and diverse interests.

But like many other things our annual conferences have changed in some respects. Our numbers are far greater than before the war—they are more representative in that we have not only architects in private practice but many delegates from local government from every part of England, Scotland, Wales and Northern Ireland. And we devote more attention to the serious side in organising our meetings and discussions which I am sure is most valuable. Our policy is to have papers by eminent people who know what they are talking about. We started this in a rather big way last year. We had a special subject to talk about, the papers were printed and distributed, and we had two good 'corner men' who stimulated interest and we had a very interesting discussion. I am sure we shall have the same this time. But I still feel that one of the chief virtues of gatherings such as this is the bringing together of architects of every kind and the opportunity it gives for mutual talks both on and off the record either in the meeting room or in the hotel lounge and sometimes even at the bar: the opportunity to talk to everybody, so that whatever kind of person one is and however one earns one's living, we begin to believe the other fellows are not such a bad lot of chaps. We discuss our mutual problems and realise once again, if we ever forget it, that we are all architects whether paid by fee or salary and all devoted to the profession and vocation which we have chosen—not because it is a wealthy and remunerative profession, but because we think architecture is worth while in itself and demands the best that is in every one of us.

The Royal Institute is all-embracing and long may it continue to be so. We must at all costs preserve our professional unity and not divide into splinter groups each with a particular side interest. I can assure you with complete sincerity that the Council of the Royal Institute, which after all is elected by all its members, is ever mindful of the interests of all of them.

The theme of our discussions this year is 'The Organisation of the Building Industry and the Architect's Responsibilities', and we have been fortunate in securing Sir Thomas Bennett and Mr. Woodbine Parish to prepare the main papers, of which copies have been circulated to all the members, and Mr. Sheppard Fidler and Mr. Grenfell Baines to open the discussion. I am sure we shall all learn from what they have to tell us and from the debate which will follow today and tomorrow. I hope that members will join freely in the discussion. Then we can arrange for any points of substance to be referred for further consideration by our National Joint Consultative Committee of Architects, Quantity Surveyors and Builders.

But before I call upon Sir Thomas Bennett and Mr. Woodbine Parish to give short résumés of their papers I must express our great indebtedness to the West Yorkshire Society of Architects for all the hard work which has gone towards the organising of this conference. Time does not permit me to mention all these hard workers by name, but I must pay special tribute to Mr. Hubert Bennett, the President, and Mr. William King, the Honorary Secretary, for all that they have done.

Next I must say a special 'thank you' to you, Mr. Mayor, and to the Harrogate Council for all the help you have given and for the generous hospitality and entertainment which you are providing. We are all looking forward with keen anticipation to the Civic Reception which you are providing for us this evening.

Our grateful thanks are also due to Her Royal Highness The Princess Royal for graciously consenting to be Honorary President of the Conference and also for allowing us to have the garden party in the wonderful setting of Harewood House. We are only sorry that Her Royal Highness cannot be present at any of our functions.

We must now get down to the more serious business—but before doing so I must call your attention to two exhibitions: the one arranged by the West Yorkshire Society in this building, and the Yorkshire Artists' Exhibition in the Art Gallery—both well worth looking at.

The President, Mr. C. H. Aslin, C.B.E.

The Secretary R.I.B.A. then read two telegrams, from the President and Council of the Indian Institute of Architects, and from the Honorary Treasurer of the R.I.B.A., Mr. T. E. Scott, C.B.E. [*F*], respectively, wishing all success to the Conference.

The President said members would be happy to know that Mr. Scott was very much better and would be leaving hospital in a day or two.

Mr. Hubert Bennett [*F*], President of the West Yorkshire Society of Architects, then extended a welcome on behalf of the Society to the President and Conference and proposed a vote of thanks for the President's address.

The Secretary

The Organisation of the Building Industry and the Architect's Responsibilities

Discussion on the Papers by Sir Thomas Bennett, K.B.E. [*F*], and Mr. D. E. Woodbine Parish, Past President, London Master Builders' Association. The President in the Chair

Sir Thomas Bennett, K.B.E. [*F*], then introduced his paper briefly. He said: We have assembled as architects to discuss the problems of what I am sure we all believe to be a fine profession, the relationship with one of the greatest industries of the country, and to see to what extent we are able to increase our service to the community with regard to the design of buildings and their economic control and execution. This unquestionably is a great responsibility. It is all the greater because within the last fifty years the industry has seen almost a complete revolution of method, and a revolution of method within the space of 50 years is a phenomenon. As the century opened the industry was largely a craft industry.

Referring to the change-over from the wealthy patron, Sir Thomas said: Today for the first time we are attempting to house the whole nation on a high standard, to educate the whole nation, and to do other things which necessitate building with extreme efficiency and economy. In that picture we inescapably remain the key people. And at the back of this is the organisation of our own offices and the methods on which we run our contracts.

I attempt to give no answers to these problems in my paper, because answers should be found according to the type of office in which we are all working. There are still a number of moderate-sized offices and private architects, but the great new feature of the profession is the large amount of work carried out departmentally, with the handicap or otherwise of departments which are non-technical, such as Finance Departments. We want to know how members think this problem should be solved. We must rely more and more on the quantity surveyor and his estimates, and we want comments on his relationship with us. We can't at any stage forget the main purpose of an architect—to plan and design. If he achieves the utmost efficiency in those other respects and fails in design the nation will condemn the profession as a whole.

Mr. D. E. Woodbine Parish: First I wish to thank you for your compliment to the builders in inviting a representative to take part in your discussions. I have just come from our own annual conference, and my President asked me to bring cordial greetings. The Federation represents 17,000 member firms, and the hope was strongly expressed that we should take every step to strengthen the alliance between the design and the executive sides of this industry. The stress at our conference was principally on the importance of education and its impact on the vital subject of productivity.

Parallel with the technical revolution which has taken place during the past 50 years, there has also been a revolution in the social and economic conditions of this country and the world generally, which has had a tremendous impact on the conduct of building work. The standard of living we are enjoying is largely dependent on the generosity of the United States, and the problem we are considering here today has a direct link with maintaining that standard although the subject under discussion is not unique or peculiar to the United Kingdom. Under O.E.E.C. there is a project for considering the whole problem of management within the constructional industries in Western Europe.

The building industry so far as the economy of this country is concerned is of great importance. It is one of the major spending industries. It has no external competition. But it is a fragmented industry with lack of confidence between its various sections. If nothing else comes from this conference than a revival of dynamic leadership we shall have achieved something. Our loyalties tend to be misplaced. The industry is indivisible. Sir Thomas referred to the profession and the industry. Surely they are one. We must think in terms of the total industry, including architects, surveyors and everybody else. Most of our problems are of human relations. The industrial revolution which started about 150 years ago is now in its second and more violent phase—that of managerial revolution. Some of our ideas are a bit obsolete. Napoleon's comment is pertinent—'There are no bad privates, only bad generals'. We need to find a means of establishing better lines of communication between those who give orders and those who carry them out. The importance of management is being realised not only in the building industry; it is the core of the contemporary industrial problem facing the world.

There is no monopoly of integrity or goodwill in the profession. They are, not surprisingly, common throughout the whole building industry. The aim must be to find a means through management of harnessing this goodwill. To do this we must get rid of a certain amount of woolliness in our thinking and behaviour.

If this needs dangerous thinking, that is a good thing. Without dangerous thinking we shall not have useful thinking. Perhaps we may start an epidemic of a higher level of industrial thought and conduct. As an industry we have reached a sort of Dunkirk. After Dunkirk this country had to replan the whole of its armed forces. It had to decide how to get back to the mainland of Europe; it had to re-equip and retrain its forces for combined operations. The building industry has reached a similar sort of position today. Joint education and training are the key, particularly management training. And in this we need help—for example, from the British Institute of Management. We must have research into this particular field of our responsibilities. And let us not get bogged down in details, but keep before us the principles which are common to all industry and all commerce.

Sir Thomas Bennett addressing the Conference

Mr. G. Grenfell Baines, A.M.T.P.I. [*A*]: We may gather this morning from Sir Thomas and Mr. Woodbine Parish that we are workers in the building industry. I have long felt that myself and wondered why circumstances tend to place us out-

side, not only in our actions but, more important, in our thinking. We are in the industry and depend for our whole livelihood on its activities and productivity.

Now about this Conference. I am sure you don't like to waste your time. You have come to learn and contribute learning and not to hear generalisations or how to suck eggs. If a Conference is to be worth while it must end something or begin something. I would like to see this Conference do both, end the talk of collaboration and begin the practical work of cooperation in industry, to make realistic proposals for this.

All would agree on the responsibilities of the architect. We know what they are, it is how we are to carry them out that confronts us.

It may be asked, should we unduly bother ourselves about the organisation of the industry, since the mind has a limited capacity? And if the mind occupies itself with this kind of thing, where is the margin for poetry? We are concerned with architecture as well as industry. I was glad to hear Sir Thomas introduce the word 'design', which hardly appeared in his paper, as something vital to the working of the industry.

I think, however, the idea that we shouldn't discuss these things comes from a misconception. Our mind has several complementary capacities, and the exercise of one is beneficial to the whole. And if the fullest discussion of organisation will give a better building service then we must consider it.

Last year the Conference to some extent was an easier one to grasp. The subject was materials and their behaviour. It was all tangible. This year it is a much more elusive and slippery subject (no offence to the builders). We are trying to grasp human material and its behaviour in the structure of client, architect, builder. I see that structure at times complete with all equipment but with a lack of waste pipes, buckling on insecure economic foundations and sagging under the strain of aesthetic adventures too tense for client and builder, although they have been known to recover from these. But most important I see it lacking the cement of understanding.

So the first responsibility of the architect is to inspire a sense of partnership and not merely to pay lip service to it; but by complete co-operation and goodwill to get everyone to feel they are really contributing to the job as a whole.

This is fundamental and therefore I believe that the basis of building service is design, in the fullest sense. One of the lessons of Sir Thomas's paper is that we must accept economics as a factor in design which must rank with the other three—the useful, the beautiful and the buildable. Architects must recognise that and bring to bear their economic instincts as they do their others.

The industry is overloaded. That is unavoidable. We must accept and co-operate with it. W. E. W. Petter, the famous aircraft designer, said not long ago that too much was expected of his industry, too much promised and too much undertaken. I could well imagine that to apply to the building industry. Our responsibility in this era of high social pressure and difficult economic circumstances is to design down to the bone. We can still get plenty out of it so far as poetry is concerned and it mustn't be imagined that, because we concern ourselves deeply with economics, we are in any way likely to harm architecture or ourselves, to spoil our capacity to produce the vital spark. This must be realised by the profession. By cutting down structure, cutting down the envelope, accepting components from other industries, working to bigger modules, tackling problems of scale and detail—we have to accept these to spread the capacity of the industry to meet the call upon it.

We have a major responsibility to our client and that I am sure is bound up also with building service. We have to help the client to discover his needs. Sir Thomas has said there should be no variations in the ideal contract, no changes of mind. Half the troubles are caused by hurried thinking at the start. Insufficient information is obtained from the client, not passed to the quantity surveyor or builder, and the job starts without the basis of understanding that is essential. We must be forthright with clients about the time factor. We must persuade them that it is good business to give adequate time for obtaining information. An American client told us he didn't mind within reason how much time we spent since he didn't pay us much anyway. It was when the contract went out to the builder that he wanted time saved.

One reason why clients don't start soon enough is that they are uncertain about costs. I would like to suggest we establish a cost information service, that we collaborate with the industry to do it, keep it up to date and give it publicity. It could go in with stocks and shares, fat stock prices, etc., as a regular news item. I don't see why we can't give basic costs for building types. It would mean less disillusionment and disappointment.

Wishful thinking is an occupational disease of architects and clients. All clients find building an adventure. Doctors render their patients unconscious before operating, but we have got to prestress our clients with a sense of adventure, of participation and a knowledge of time and cost.

In my office, we have found it best to use the quantity surveyor as a co-designer. For most of his time he should be in the architect's office. He is one of the most useful men to help to bring the economic factor into balance. He is not at present being used efficiently as a co-designer.

Consultants and Their Use. We have found that a combination of consultant service with specialist service which has 'know-how' and knowledge of materials gives the best of both worlds. We have done it on two big jobs; we have called in the specialists and the consultant has checked their designs. Thereby we get both theoretical and practical advice. Where we fully use design services or specialists we take a 2 per cent reduction in fee. This is allowed for in the professional code.

Mr. David Woodbine Parish

Responsibility of Building Industry to the Architect. Mr. Parish said the designers are outside the executive side of the industry and this does not obtain in many other industries. True. Couldn't we give better building service if we were in it, employed by it? We could, but only under certain conditions: (1) Our status would have to be high; equivalent at least to Director. (2) There would have to be a safeguard on quality. An enormous amount of trouble is given to architects by bad workmanship due to poor supervision in the industry. There is no real system of inspection. It should not be the architect's job to be a policeman as the client expects and as some immoral builders have told me. To suggest doing good workmanship only if policed

Mr. G. Grenfell Baines

Mr. A. G. Sheppard Fidler

is a sign of very low morale. It is up to the industry to introduce its own system of inspection. The alternative is a national system of building inspection. I am sure the builders wouldn't like that but would rather put their own house in order.

The R.I.B.A. should encourage experiments in negotiated tenders; I see no harm in this. Sir Thomas suggests competitive tenders are the only way, but if we had a price exchange system and constantly reported basic costs of building back to the public, we could take care of this matter of price. There would always be an authoritative check.

To recap: The architect's chief responsibility is for balanced design; he can best achieve this by composite training in school, office and industry followed by post-graduate study. The R.I.B.A. should try travelling symposiums to help people in the provinces. It is up to us to accept manufactured components. We must be realistic about costs and time requirements. I would like to see the Institute initiate joint bodies for research, price information, education and for simplification of documents. I understand there is joint machinery in existence. It needs a few more connecting rods and a few cranks perhaps.

I hope this Conference will mark the beginning of moves from the R.I.B.A. to set the wheels in motion.

Mr. A. G. Sheppard Fidler, M.A., B.Arch., Dist. T.P., A.M.T.P.I. *[F]*, City Architect, Birmingham: I should first say how much I have enjoyed and appreciated the papers which have been admirably presented to us by Sir Thomas Bennett and Mr. Woodbine Parish. Most of us are so bound to our drawing boards and desks that it is good now and again to pause and look, as we are now doing, at the whole trend of development of the building industry and the architect's responsibility to it and to his client. Conditions have changed so greatly that it is difficult unless we can pause and look at the picture to see how very different conditions are now from before the war. I think this is the first such review which has ever been carried out. It would be interesting if we could unearth one which was carried out at the turn of the century and also to know what the R.I.B.A. will be discussing in the year 2000.

As you probably know, I am the City Architect of Birmingham, and the comments I have to make will naturally be presented from the point of view of an official architect in charge of a very large programme of work in a great city.

It seems to me that the most important point of all in Sir Thomas Bennett's paper may be summarised as 'time and money'. The necessary restrictions on capital investment during the war completely changed the normal routine of the architect's work in relation to his client, whether that client was a private person or company, a local authority or government department. Before the war it was accepted as normal that a reasonable space of time could elapse after client's instructions were received until building could commence. Now, owing to our system of financial control and to the necessity of obtaining a great many approvals, the whole process of design preparation has to be compressed into a much shorter time. We have all suffered from this system of starting date legislation—with insufficient time for preparation of drawings, the quantity surveyor getting very rough information, perhaps a sudden decision to build one half first and so on and so on. This method is inefficient and costly, nevertheless there is no doubt that the client is going to require his buildings to be designed and built in a shorter and shorter space of time, and we must expect this pressure to be maintained. While new methods of construction and assembly are greatly helping the provision of buildings in shorter and shorter time, the designing time seems unnecessarily long to the client. Can we reorganise ourselves to take account of these new conditions? I think we must if we are to hold our rightful place in the industry—otherwise we must expect to see a spate of purely utilitarian buildings, especially for industrial development, in which the architect has no part.

Sir Thomas mentions the great difficulty facing the architect today, of being able to estimate the cost of a building with reasonable accuracy. The difficulties are known and recognised by architects and quantity surveyors, but the client tends to be irritated by the apparently unbusinesslike attitude of many architects in this matter of cost, not only for building costs but of architects' fees. Do we really do all we can to estimate wisely, keep our clients informed of running costs, and not be afraid to speak our minds when discussing probable final costs? The engineer's method is to get a figure and add something. The architect tends to get a figure and then take something off for fear of frightening his client.

The great changes which have taken place over the last fifty years are especially apparent if we look at the scope of building work now carried out by local authorities. From being comparatively small building owners or building agencies in the early years of the century, the responsibility of local authorities has so increased with the complexities of modern life and the growth of our population, that their building programmes are now counted as among the most vital in the country's economy. The responsibility for education and housing alone has meant that building programmes of quite staggering financial size are commonplace. Only in fairly recent times has this function of a local authority as building owner or agent led to the placing of responsibility for such work under the control of an architect in charge of an architectural department. The importance of the architect's contribution is now accepted and most authorities carrying out substantial building work have appointed a qualified architect as Chief Officer of an Architects' Department.

There seems to be a great divergence of views among architects and others about the scope of work carried out by salaried architects. Some hold strongly to the opinion that the official architect exists primarily to deal with maintenance of existing buildings, to advise his authority on the possible conversion of old buildings and so on, with occasionally a small housing scheme to do, just to keep his hand in. All the new work in this case is, of course, dealt with by architects in private practice. Others maintain that the official architect does everything, far too much anyway, and is robbing private architects of commissions which should rightly come their way. Surely these distorted views should be abandoned and a more balanced picture substituted of an official architect carrying out an interesting mixed programme of work with private practising architects also sharing in the work in collaboration with the official architect. Where this arrangement is in operation, it is working well and some excellent results have been obtained. It is quite wrong to assume that there are two kinds of architects and two kinds of architecture. We are all architects, practising the art and science of architecture, while taking our essential place in the service of the community as the key member of the building industry team.

As local authorities collectively are now probably one of the largest building owners, it is reasonable to consider whether the rules which they have made for their own work in this field take account of the greatly changed conditions in the industry that we have been discussing or whether in fact they place the local authority at a disadvantage, now that their contracts are competing for labour in a time of full employment. These rules have come into being through the very proper and admirable wish to spend money wisely. Those who criticise local authorities for being slow moving and ultra-cautious should remember that these elected bodies represent the ratepayers and that they are trustees who have to use our money in the most economical, efficient and productive manner, for the benefit of the whole community. From the early days it has, therefore, been a principle that each contract concerned with building, as indeed

any commodity, should be tendered for in the open market and that, other things being equal, the lowest tender be accepted. It has, of course, been necessary to make exceptions to this rule—for example, when certain specialist materials only made by one firm have been specified, and so on, and in particular since the war a large number of contracts have been negotiated and not tendered for, especially with new traditional house-building firms, in order to secure continuity of output and hold labour forces together. Local authorities have recognised the necessity for negotiation and for making essential decisions before a contract is made, while not abandoning the basic principle of tendering in order to ensure fair competition and the provision of buildings or any commodity at the lowest price.

But there is a vast difference between a contract for a standard commodity and for the highly complex modern structures required for our society. If a building is to be really designed, and not just assembled as a design, it is necessary, as Sir Thomas has pointed out, for the form of construction to be determined at an early stage in the formation of the design and for essential decisions to be taken concerning type of floor, windows and many other elements and materials before working drawings can be completed. Such items cannot be left in a bill of quantities as a prime cost or provisional sum to be tendered for at a later date without leaving so much undecided that the progress of the work, once it starts, is certain to be subject to delay and uncertainty. Again, if architects are to be able to design economically and practically, quite considerable specialist advice concerning structural systems, heating and ventilating, and so on, should be available at an early stage, and such advice may not always be readily available from salaried members of the staff of the local authorities. If an efficient structure is the aim, then this technical advice may be required at a very early stage, perhaps even before the client has finally made up his mind to proceed with the job at all. There is, therefore, a need for local authorities, nationalised boards and other similar bodies to understand the complexity of modern building and to be flexible in their interpretation of the principles and rules which they ask their technical officers to follow. Local authorities have always successfully adapted their systems to the needs of current practice and met the challenge of the times. I am sure that they will do so now, but there seems to be little doubt that some revision of the rules may be necessary.

The benefits of selective tendering too are becoming more and more apparent, and the architect to a local authority should know when it would be wise and right to advise his authority that the most satisfactory and economical results are likely to be obtained by making a selected list and by limiting the tenderers to those contractors known to be capable of doing a good job and, most important, of adhering to a time schedule. This undoubtedly places a very special responsibility on the shoulders of the architect advising the authority on the composition of the selected list, but I think this is a responsibility which should be accepted and administered with the strictest impartiality.

On the question of collaboration at the pre-planning stage between architect, quantity surveyor, various consultants, engineers and the contractor, it is difficult to see how this manner of working could ever become generally acceptable to the local authorities because of their strong adherence to the tendering principle; in fact, I think it essential that there should be a check on contractors' prices and the competitive system ensures that this is so. This does not mean to say that such experiments are not of value. One of the great advantages of working for a large local authority is that there are greater opportunities of experiment in organisation, contracting methods, and design, because of the scale and continuity of work involved.

Sir Thomas's list of qualifications of the efficient architect of today is certainly formidable, and he suggests that only in partnership or a department can all the necessary qualities be found. This may well be so. Certainly there are advantages in an office where a great variety of jobs are being dealt with—large and small, simple and complicated—and my own experience leads me to appreciate the opportunities for up-to-date organisation and design in a large local authority office. But what of the average size practice and department, and those departments which deal only with specialised buildings like banks and hospitals and insurance buildings? How can these architects keep abreast of the rapidly changing development of architecture?

Sir Thomas's summary of the profession's essential qualifications does not pinpoint the means by which the practising architect himself can keep up to date. Conferences like this, exhibitions, lectures at the R.I.B.A. and at the Allied Societies' meetings, are excellent in their way but are they sufficient? I was fortunate in attending the recent Symposium on Multi-Storey Flats and I believe the Symposium on Hospital Buildings was equally successful. This success leads me to think that more opportunities for study and discussion of this kind would benefit the profession exceedingly, and might well be expanded and conducted on a regional basis. They would constitute a sort of post-graduate course of studies. No amount of study of articles in the technical press, reports of Science Committee lectures, and so on, can take the place of personal participation at a talk by an expert, giving opportunities for frank discussion and exchange of views.

There are many other interesting points raised in these papers, but I will not attempt to enlarge on them as I am sure that a great many other members would like to bring them up for discussion, and so I will now leave the floor to them.

DISCUSSION

Mr. John Kean [*A*], Ministry of Works, Scotland: I should like to support what Mr. Sheppard Fidler said about the advantages of getting together with the contractors at a very early stage in the project. Many people have studied this problem before this Conference and I think it has been generally agreed that the ideal time to bring the contractor, architect and consultants together is *before* completion of the working drawings, but under the present system of tendering it is impossible to do this before the contract is let and the design is finalised. We in Government Departments and I believe most local authorities are committed generally to competitive tendering on a selected list of tenderers. We have got so far as selective tenders, but I don't think there is any possibility from my own experience of working with a Government Department, the Treasury and Public Accounts Committee of getting rid of the competitive tender system, ideal as the other system is. I hope some acceptable alternative may be devised and that members of this Conference may be able to offer suggestions.

My second point is one which I feel has received insufficient notice among architects. We have had a more or less public admission that under the present system it is impossible for contractor, architect and consultants to get together soon enough to give the client all the benefits of working as a team. There has, however, been a beginning made in this direction which I suggest should give architects very seriously to think. It takes the form of a group (set up by one of the Insurance Companies) which undertakes to provide for a client a factory or whatever it is he wants completed ready for occupation in a specified period, either on a rental basis or, I believe, for sale. The idea is that there is a sort of glorified co-ordinator who gets together the team of architect and consultants, quantity surveyor, engineer, contractor, etc., and welds together their efforts, thus relieving the architect of the multifarious responsibilities which Sir Thomas has outlined, and acting as a middleman between the client and the architect. I believe the system has proved to be workable and that is perhaps its only justification. I want to draw the attention of the Conference to it and should like to hear members' views, because I don't think any architect here would like to see that middleman introduced between his client and himself.

Mr. G. Noel Hill [*F*], County Architect, Lancashire County Council: I should like first to add my compliments to Sir Thomas and Mr. Woodbine Parish for their most interesting papers. They are largely factual, but I think if one reads them correctly they are also very critical. They are particularly critical of the profession, and that being so we cannot go away from this Conference and do nothing. We cannot afford to be complacent. There are three points I will pick out and put in question form: (1) Do we always assess the relevant values of different types of construction? (2) Does

our advice always result in the use of the most economical construction? (3) To what extent are architects responsible for the present conditions of contracting, which have resulted in the builder losing contact with the workmen?

Of these, No. (3) is the most important, because the answer to that is the answer to the first two. I consider that architects are largely responsible for the present unsatisfactory conditions of contracting. These are unsatisfactory for the builder and consequently the cost of building is higher than it need be in spite of the increase in the cost of labour and materials. The architect calls the tune and I think the trouble is we are calling too many tunes. If you consider the difficulties of the general contractor who is tendering in his area to a number of private architects and a number of local authorities, he is called upon to tender for a variety of jobs all with different forms of construction, often with proprietary articles that he knows nothing about. And we expect the industry to organise under those conditions! It can't, and this has to be paid for.

There are a number of ways of tackling this. The way I propose to deal with it is in the tune we are calling. And I must make an apology here. I must refer to the efforts of my own office. Those of you who read the May issue of the R.I.B.A. JOURNAL will know what I mean. We set out a few years ago to try to reduce the number of tunes we were calling, to see if we could bring down costs. We simplified our requirements so that the builder had the job to himself at least until the roof was on and after that he had complete control of all the specialists. The result was a complete tumbling down in the level of tenders.

Mr. Johnson Blackett [*F*], Borough Architect, Newport: I think the papers we have heard today have been long overdue. I have attended this Conference regularly and have heard very stimulating and interesting papers on a variety of architectural subjects, but this is the first time I have attended a Conference where fundamental things about which we are all troubled from time to time have been clarified and brought to our notice so clearly. There are one or two points which I want to raise on the papers.

We would all agree that architectural design is the principal and most fundamental thing of all. But there are other things just as, or more important, which cost us architects a lot of trouble with our clients. These are the things we have heard Sir Thomas and Mr. Woodbine Parish talk about—full information, the obtaining of a complete set of working drawings that can be worked to without constant reference back, a first-class specification, a good bill of quantities. Given those there is no reason why we should not get a good, secure, reasonably priced building built in reasonable time.

Mr. Sheppard Fidler spoke about the necessity for giving the client accurate estimates, and not taking a little bit off your first estimate for fear the client shouldn't want to go on. I have found in practice that it is a very good thing indeed to do a preliminary estimate, but this should not make any attempt at all to compete with what you may think is going to be the lowest tender. The method I adopt is to instruct the quantity surveyor to price the job as far as possible from drawings and information given at current rates, then add a small percentage to each item, usually 5 per cent; to which at the end of the contract is added the usual 10 per cent for contingencies. Preliminary estimates are then usually quite full enough to save the embarrassment of submitting an estimate which comes below the lowest tender.

I don't think the competitive tender system is a good system at all. I know it can be argued that one need not advise the client to accept the lowest one, but it is difficult in fact to persuade him not to. I am a very keen believer indeed in the selected tendering system, have recommended it to my authority and all their tenders are now obtained in this way. The lists are examined from time to time and brought up to date, and careful inquiries are made about people who apply after we have advertised. I find by that system we get a better standard of work and more reliable people.

On Sir Thomas's point of specifying subcontractors, it might be a good idea to specify them in the contract. I don't know if it has been done. And finally I think it is essential that all site meetings should be organised by the architect.

Sir Thomas Bennett then replied to some of the points raised. On Mr. Noel Hill's question whether we properly assess the relative merits and suitability of different methods of construction, he thought the B.R.S. might be asked whether they could give us standard information of some kind, frequently issued and revised, say, every quarter or six months. This was the kind of analysis he was constantly finding himself compelled to carry out. In the case of one factory scheme, he had submitted 23 schemes before the client decided on the type of factory to be used. In the case of another project, a block of flats about eight storeys high, they had designed the scheme in both reinforced concrete and structural steel; they had found that on a tender of £383,000 there was a saving on the reinforced concrete structure of £30,000.

The lack of continuous association between contractor and workmen was a reason for the architect assuming responsibility. This lack had arisen partly because in the middle thirties contractors, in their effort to get work, tendered all over the country. Lack of continuity of employment was a major disability of the industry. A specialist contractor needed specialist workmen. Certain building operations had proved more economic when carried out by sub-contractors; but no other industry tried to work with such frequent engagement and discharge of workmen.

Mr. Woodbine Parish: I would like to get down to the fundamental point behind all industry: how one can create a wholesome atmosphere in which people are going to work happily and contentedly. Unless we are able to achieve this very elusive thing, so much skill in planning, so much ability in design is dissipated. I believe the building worker is taken too much for granted by the profession. You imagine people are carrying out your work without taking much interest in it as individuals. I believe the same criticism may be directed to building contractors. One is prompted to ask, whose fault is this? Sir Richard Coppock has referred to 'hiring and firing workers by the hour'. One can't hope to get a great deal of loyalty from an individual on that tenuous basis. For the contractor the lack of continuity, the need always to secure a flow of work to see the order books filled—these are all problems with which we are daily beset in building companies. The negotiated contract may very well be a means to finding a solution of the problem of greater continuity, doing away with this incredibly hopeless catch-as-catch-can business which goes on in the false belief that economies are effected by producing a wrongly stimulated sense of competition. So much depends on apt selection of the firms of contractors and sub-contractors. What we need is an ability to come together as a team under the guidance of a dynamic individual in the person of the architect. Successful teamwork stems from good leadership at the top; you can't get it at any other level if you do not have it at the top level. The ability to inspire must start at the top. We must give people a feeling of taking part in something worth while, and must concentrate not on what a building looks like when illustrated on the glossy pages of the journals, but on the spirit of love and care put in over a period of time to produce good building. This applies not only to big buildings; in humble jobs care and thought must also be given even to the smallest details. It may be argued that there isn't time: but I believe that an enlightened attitude of mind can filter down from the architect even so far as to the fellow who makes his cup of tea on the site.

Mr. H. S. Oddie, Vice-President, Institute of Builders: Sir Thomas referred to the revolution which has taken place in the building industry in this century. I entered the industry more than 40 years ago at the right point from which to ascend the ladder —the bottom rung; so I think I can claim to have some experience of the social and technical changes which confront us. And I think the building industry is outwardly prosperous, with bigger and better motorcars and overdrafts for its members, but that it is inwardly sick. It has the high temperature of advanced tuberculosis with all sorts of ills in its blood stream. But in a gathering such as this we can do much to remedy this sickness.

On the last contract I visited—which was yesterday—a contract between £500,000 and £600,000 in value—we have had 400 drawings from the architects, many of them

subject to revision. The contract should have been finished within 18 months and will take 21 months. I expect by today's post more revisions will have arrived. This is very serious, because not only is the cost of building increased, but there is also the dead weight of capital cost incurred by the contractor and there is the wastage of capital owing to the fact that the premises are not able to be used for their proper money-making pursuits. I will also quote a reinforced concrete building on which we were engaged. Before we had got to the first floor we had 37 revisions of the reinforcement details, many of them reaching us at the time of pouring the concrete. There are too many revisions too late.

It is fundamental that the fullest information should be given to us at the time of tendering. How quantity surveyors can possibly produce bills of quantities when all too frequently working drawings are not available, passes my comprehension. And your drawings must be intelligible not only to those who produce them—I sometimes wonder whether this is the case!—but to the man who is going to construct his part of the job from them. Unless a man can feel that the drawings are readable, and so can identify himself with his part of them, you will lose that feeling of teamwork. For in a team all should have an equal part. The architect is no greater than the humble labourer.

If we in this industry are going to serve the community it is essential we should give you intelligent tenders. Far too often there is a spate of tenders reaching well-established builders' offices. It would be a very good thing if architectural departments and firms could give advance notice of anything that will be coming. I echo what has been said about selective tendering. I have been a member of a local authority for a good many years and I think that indiscriminate tendering is a bad thing. You get casual tenders and tenders that are not tenders at all. It should be possible to instil into your client the necessity for trusting your selection of a short list. I am glad, however, that Sir Thomas thinks of the struggling young contractor. I should hate to see all competitive tendering cease because that would deny the right of young, ambitious and able firms to rise to the heights they deserve. My industry supports the principle of competitive tenders but on a selective basis.

In my opinion not enough has been said in this Conference so far about education. My own institute, the Institute of Builders, is very much interested in this subject and I ask your noble body to believe that we have principles which inspire us quite as much as yours. We hope that in the not too distant future we may set up a Board of Building Education and think it would be a happy thing if the R.I.B.A., the R.I.C.S. and all other proper bodies join together in bringing in a scheme of education which will be common to us all until we branch out either into design or into the executive side of building. There will then be a better understanding between the two sides.

I should like also to see the operatives brought into our partnership; not at the higher levels, but nevertheless in. We must get off our pedestals, we must bring in the craftsman, and the unskilled man in the building industry. I suggest that you should go out on the jobs and talk to the man doing them, let him see that you recognise his worth.

Now to pass from what is better done by the industry as a whole to what my own firm is doing: we have had for many years a distribution of part of the profits to everyone from the labourer level up: we have a supplementary pension scheme as well as the contributory one: and when a man has grown old in our service we remember that.

In a higher sense, my company in London has recently established work study groups, and a system of pupilage, of entry and training for management such as my Institute is interested in. In the Merseyside branch we have set up a team to make a survey of a number of firms, embracing contractors, architects and quantity surveyors. We shall ultimately produce a report which will be available to the R.I.B.A. and of course to the industry generally. This kind of activity is essential if the building industry is to serve the community economically and not price itself out of existence.

I think also that some system of penalising the client who frivolously changes his mind should be devised: for example, make him pay double daywork charges. Daywork charges on minor variations do not in the long run pay the builder. He makes his profit by making the profit he first envisaged in the shortest possible time. I think we overdo the respect we give to the building owner. We are servants, not suppliants. I think particularly if I were architect to a local authority I should be rough with them and make them make up their minds much earlier.

Mr. Rex Procter [*A*], Leeds: I am a quantity surveyor and so a simple sort of man. But it seems to me there are two simple basic facts which have so far been ignored. The first is that the client was not invented to serve the profession or the industry, but the other way round. And the other is that the architect is not only morally but also legally a leader, under the contract.

I agree with Mr. Grenfell Baines that half the problems arise because of lack of contract preparation—it is not at all unknown in my experience for alterations to take place long before construction is begun; we start checking for the bill of quantities and then start checking again because of alterations. But having agreed with Mr. Grenfell Baines so far, then I feel we must get back to what the client wants. It may be he is not prepared to give time for contract preparation. There are then two alternatives: (1) Tell the client he must do what you want, or (2) Do what the client wants and get something out in the time. And I suggest that, although in my opinion the present system of competitive tendering is the best one, you can't use it unless you have enough time for pre-contract preparation. In that case you must adopt some other method. We have heard committee after committee, from the Bossom committee onwards, say that lack of pre-contract preparation is the root of all our evils, and there is no point in discussing it further. It doesn't make the client any more willing to meet the problem. Local authorities, for instance, work to starting dates and committee dates. And if the time limit they give you creates problems you must overcome them by any means at your disposal.

I should like to say, however, that I agree with Mr. Oddie on frivolous alterations.

Now to come to the question of the architect as leader: I am afraid that unfortunately the architect very often doesn't lead. I have unfortunately spent quite a lot of time on arbitrations and in half the cases the dispute arises because the decisions the architect should have taken were not made at the right time. The profession has to put its own house in order with respect to that.

And here I come to the point Sir Thomas made that information is not given at the right time. He said the contractor should have drawings and specification before the job starts, but I think they should be ready before the quantity surveyor starts. That is, however, unusual.

I was recently on a Building Brains Trust, and one of the questions asked was: If a client went abroad at the beginning of the job, would the saving on the job be sufficient to pay for his holiday? The answer was no; but it was suggested that if the client's architect accompanied him, then the saving might be sufficient to pay for both their holidays!

To sum up, therefore: you must satisfy your client. The proper way is to have the job properly prepared before work starts. But if you can't get that you must satisfy him in some other way, either by the fixed fee method or by a competitive schedule of prices. In this case the client must be told that the method may in the long run cost more money and may not save time.

Mr. M. B. Tetlow [*A*], Harrogate: I have for many years played a supervisory part in the erection of houses on a very large scale and so, looking at Sir Thomas's excellent paper, it was to the section labelled 'House Building' that my mind turned. I found these words: 'As a whole this section of the industry appears to be very highly organised and very highly efficient.' I am glad Sir Thomas thinks that, because last year 50 per cent of the labour employed on new works was employed in house building, so if Sir Thomas is right the building industry is efficient in at least 50 per cent of its work anyway. But house building falls into three categories—flats, council houses and private houses. And while I think Sir Thomas is right so far as flats are concerned—which more nearly approach other forms of big building work than do houses—I am not so happy about the building of the cottage form of house. Only recently I came across a contract for a sizeable local authority housing scheme

where the bill of extras was nearly 50 per cent of the original contract price. It was on difficult land and much of the work came into the category of site levelling and was not within the contract price. I don't think there is anything like adequate consideration given to this kind of work at the beginning of a contract. The builder starts without proper drawings, levels or organisation.

My second point is that the national policy at the present moment is towards an increase in the building of private houses by the speculative builder. In that sphere we have a history that is anything but happy. I should like to appeal to the building side to ensure that those responsible—namely the client and the builders—do bring in the architect, so that we don't now enter upon a phase of large-scale private enterprise building of the sort we saw before the war, ill-designed and shoddy. I would also appeal to the architects to give of their best in this class of work and not to look on it as below them.

Sir Thomas Bennett then summed up again the points that had been discussed. He said that though it was undesirable it was inevitable that sometimes jobs would have to be started without complete drawings. It was then the duty of the profession to perfect some technique by which such work could still be carried out with first-class organisation. The client would in such cases be dependent on estimate and not on tender as a guide to the total cost and this was a matter for a highly skilled assessment by architect and quantity surveyor of conditions and locality, the time factor and conditions in the industry at the time. The technique of running a contract efficiently with incomplete drawings was as much a part of the architect's job as to run one with complete drawings.

It was agreed there were at times frivolous alterations, but there were also some which were unavoidable, e.g. those occasioned by developing techniques in industry. Some study needed to be given to the right management of alterations.

On the question of the open tender: that was tied up with Mr. Grenfell Baines's point about the quality of building. There were many qualities of building, and we need not be ashamed of that. Almost identical specifications could be tendered for by builders with a knowledge of the different standards of quality they would be expected to produce. An ordinary shop specification for instance was not much different from a bank specification, but two completely different sorts of building would often result. That was the real defect of the open tender: one builder would give a totally different quality of building from another.

Sir Thomas thought the difficulty here was that the building industry had not yet found how to bonus on quality as well as output. In his brief excursion some years ago into the boot and shoe industry he had found that other industries had discovered how to do this.

Mr. H. S. Howgrave-Graham [*A*], Chief Architect, Crawley Development Corporation: There are three points which have already been made and which I should like to stress. The first is that I was pleased to note in many opening remarks the stress on the architect's service to the community. That is one of the biggest changes which has taken place in our profession. In days gone by an architect did tend to regard his buildings rather more as his own personal monuments. Today most architects accept that their prime job is service to the community.

In the New Towns we have had an opportunity of seeing that team work can still produce good architecture. It is possible to point to buildings where it is impossible for any one man to say 'That is my conception.' Of course this teamwork must run not only through the architect's office but right down to every operative on the site. I therefore feel that I have a personal responsibility if in building 1,500 houses the builders have regarded them as coming off a line and the operative has forgotten that to the individual who is going to live in each house every detail is of importance. A little bit of lack of care, lack of supervision, makes someone's life a misery for years to come.

There is one way in which builders can help us a lot. That is in supplying their own supervision and not relying too much on the architect. You notice particularly when you have a clerk of works that the builder relaxes in his supervision in the knowledge that if the clerk of works doesn't pass a particular bit of work it won't get through.

To come to the question of documents, I think it is important to stress the point that drawings and bills are a means to an end. I should like particularly to draw the attention of everyone engaged in education to this. One's staff do like to produce masses of drawings when one drawing which gives the basis of the whole thing with smaller details would do. But I think the old idea of sketches in bills of quantities is good and not practised often enough. And I think some way of combining the specification and bill of quantities is to be sought, some way which will prevent people from having such colossal numbers of documents to work through. It is not surprising if at present the builder asks for a long time for pricing.

Lastly, on the value of conferences. I think we have all of us been aware of most of these points that have been raised in our daily lives, but pressure of the day-to-day job prevents us from giving a lot of time to thinking of them. The value of this Conference would be increased if it were someone's responsibility to do some follow-up work, and it would be very helpful if the R.I.B.A. could make it its job to see that the good ideas which have come out of the Conference are followed up. The way is not by appointing new committees—we have too many already—but to delegate to the appropriate committees the responsibility for producing a report by a certain time on certain aspects. We need more dissemination of information. Individual research is expensive and too often is not disseminated widely among the profession.

Dr. Ronald Bradbury [*F*], City Architect and Director of Housing, City and County Borough of Liverpool: A dramatic critic once described an actress as running the whole gamut of emotion from A to B. This whole Conference has done just that; it has been A to B, the relationship of the architect to the builder. But of course it is necessary, as has been pointed out, also to introduce another letter, and unfortunately this makes an order rather different from the usual alphabetical one; because C for Client comes first. We must not forget that we only exist to serve our clients and that without those clients we should have neither use nor purpose. This is not new, but I think it is necessary sometimes to remind ourselves of this important fundamental point. We as a profession are the middle man between the purchaser, the client, and the wholesaler, the building industry. The client gives us general instructions which we redefine to the best of our ability as precise instructions for the builder to create the necessary construction.

It is to this question of the preciseness of the instructions which we give that we are—quite rightly—turning the greatest part of our attention this morning. We must give precise instructions, but if they do not have regard to the practical issues involved, to the economics and availability of materials and so on, then preciseness in itself is not the complete answer. Our instructions must be reasonable and related fully and completely to the conditions in which the industry and we ourselves are working today.

The adequacy of the drawings we produce is fundamental and I have been encouraged by some of the speakers who pointed out that if our clients don't give us sufficient time to complete everything before building starts we mustn't just hold up our hands in dismay, but must try to develop a technique which will take cognisance of the limitations of time placed upon us by certain clients.

Sir Thomas mentioned two types of alteration: first the frivolous—and we must have a little frivolity sometimes; we do indulge in a little mind-changing from time to time, but we try to minimise it. Then there is the alteration which is necessitated by changing conditions, circumstances which we only find out on the site, or some factor which could not be determined beforehand. But there is also a third type, and that is an alteration which is important and that most of us would overlook however much time we were given to prepare all the necessary details, because we are not sufficiently geniuses to have everything absolutely right before building commences. There must be alterations arising out of improvements we come upon as the building develops.

The matter of open competitive tender is a matter of very great difficulty for official architects. As other speakers have pointed out, where public money is in-

volved, tenders must be let in such a way that there can be no doubt about the propriety of the arrangements which have been made before tenders are signed, sealed and delivered, and therefore it is inevitable that many local authorities should insist on the continuance of tender by public advertisement. I am wondering whether there is some possibility of some system of grading contracting firms. If we could be satisfied when we advertised for tenders that only firms with certain experience and a certain standard of organisation would tender for it, then I think most of us would be satisfied with the open tender system. But when we advertise for tenders for a big job and may get a man-and-boy firm giving the lowest tender, that leads to difficulties. If firms could be graded, a, b and c, so that the small jobbing contractor could tender up to an agreed figure, we could advertise tenders on that basis and would know that we were going to get the calibre of tenderer who could carry out that particular class of work. There would be nothing to prevent the expansion of a firm from a small unit. I would envisage some up-grading as various contractors carried out jobs at different levels.

Finally, I want to speak about the question of management and administration in an architect's office. Most of us in our training get little teaching in administration and management. We have to find out the hard way. Fortunately, during the war years I left architecture for a period in Government service where I came into contact with administration and learnt a great deal I could never have learnt in an architect's office. I suggest that the R.I.B.A. should attempt to inaugurate a class or course—lasting perhaps only a week—in office management from the architect's angle, enlisting experts in various other industries if necessary, to give us instruction in the art and practice of office and contract management.

It is not really a great deal of use to discuss these problems among ourselves. That is a case of the blind leading the blind. I should prefer us to sit at the feet of experts in office administration and business efficiency and learn from them something of real value. The importance of such subjects has been emphasised in this Conference this morning.

The Discussion on the first day of the Conference ended at this point. The Discussion on the second day continues below.

The Secretary R.I.B.A. announced that Mr. Frank Heath [*A*] of Melbourne was present at the Conference and brought with him the very cordial greetings of the Royal Victorian Institute of Architects, and the President said how pleased the Conference was to receive the message.

Sir Thomas Bennett summed up the previous day's discussion. He said: Yesterday we stated the points which require answer and analysis.

Speakers emphasised the desirability of commencing contracts with complete drawings and bills of quantities. They also referred to the fact that some contracts must be started without complete information, and it was agreed that it was the duty of the profession to find methods of handling such contracts which safeguard the client.

There was some reference, but not enough, to one of the major questions: the correct method of obtaining all knowledge needed from consultants or sub-contractors who are specialists in some aspects of building.

It would be a great advantage if a number of speakers would tell us what in their own offices they do with regard to using specialist knowledge of this kind. Do they employ consultants, do they have staff who supply it, do their sub-contractors include design? What safeguards have they taken to make sure the client doesn't pay too much? Is the client aware that such services are rendered?

Many people feel that when the team is brought together there still isn't complete collaboration. In many cases contractors seem to look on sub-contractors as people they can't control. We should gain if various members gave us their own experience of whether this is a widespread criticism or whether there are only isolated cases. When it is left to contractors to appoint sub-contractors, does this work? Is work better done when firms employ their own sub-companies, or is it more expensive? Does it improve co-ordination?

There has been no reference to the standard of knowledge and supervision of clerks of works. There is a good deal to be said for the point of view that he hasn't changed sufficiently in background and ability and is still too much the watchdog of the builder, insufficiently a collaborator with the architect. At the same time it is still legally a necessity for the client to employ and pay a clerk of works. Is the trouble lack of education, training, background, or what? The Institute can only learn about these things and issue proposals about them if we get the widespread experience of members.

Mr. Woodbine Parish said he agreed with Sir Thomas that they ought to make something really constructive of the day's discussion. The previous day's discussion had wandered widely; there had been some criticism and some inter-sectional faulting which had perhaps been useful. They should now pass to the next stage.

He said the problems facing the industry, flowing from full employment and post-war conditions, had been touched on but not fully realised. One or two speakers had made reference to the impact management could have on building work, and it was true that we needed to apply ourselves to the whole process of breaking down the various stages of assembly of a building. Management consisted of the organisation of those stages. And in this the industry, the profession and commercial interests must get together and synthesise the whole process of assembly management. There needed too to be work study, and he thought too little space was given to management in the R.I.B.A. course of training.

But the fundamental thing was to get a new spirit throughout the industry, perhaps a more Christian outlook. Against this, such problems as limited or selected tenders were trivial. To say this was idealism and unrealistic was to fail to appreciate that realism was based upon simple ideals. To achieve good building we needed a practical approach to fundamentals.

Mr. Grenfell Baines said he felt Mr. Woodbine Parish had been very brave in speaking as he did about a new spirit in the industry. He himself hoped that this spirit would go right through the joint committees he hoped were going to be appointed.

He wanted to refer to several things that Sir Thomas had said, but first he wanted to say that he thought he had not done Sir Thomas justice on the question of design; he had been so anxious to make it clear that design was the basis of all building service, and that first-class design would promote good morale on the job.

The Institute had laid down the means by which sub-contractors should be appointed by contractors and he thought that if we stuck to those rules we could control the contractor. Once sub-contractors were appointed they were the responsibility of the contractor, but the architect should exercise control by asking the contractor to appoint sub-contractors under the main contract.

He thought clerks of works were not paid sufficiently and so the job was not thought worth while. Clients should be persuaded that it pays to appoint a good clerk of works, and the method of training them was important also.

He admired Mr. Oddie for also seeking a better spirit throughout the building process and he hoped other members would say how they thought a greater feeling of trust could be established.

He thought we should tell clients that they must wait until the necessary planning had been done.

On Mr. Tetlow's point about collaboration with the speculative builder on house design, he thought architects must realise that builders are also to some extent designers. He suspected many of them were in fact frustrated architects, and he noted that many of them sent their sons into architecture. We should collaborate with them and bring them in as co-designers, and he hoped the R.I.B.A. would arrange a joint committee of architects and speculative builders.

He would like Mr. Woodbine Parish to expand his point about good management and how it would affect the architect. Under the present system, if one got a good builder things worked well.

Dr. Bradbury had put in a plea for a little frivolity for architects. He (Mr. Grenfell Baines) thought the client also must be allowed a little unreality—just about as much as a wipe of garlic in a salad. He thought the architect's share should be the equivalent of a hint of nutmeg—not more.

Finally, Mr. Grenfell Baines said the resolution he would like to see come out of the Conference would be one asking the Council of the R.I.B.A. to take immediate steps to strengthen and extend the joint machinery for working with the building industry and allied professions.

Mr. Sheppard Fidler: It has struck me that there is bound to be a very great variety of approach to the problems we have been discussing, in the light of our own different circumstances and backgrounds. The architect in charge of a large official office, for instance, has different problems from the private architect in a small country town.

The same thing applies to contracting firms. These generalisations are therefore extremely difficult and dangerous, because there are cases where they don't apply. For instance, take management: it is of great importance in the case of a big contracting firm, but I can't see that the small builder can possibly be much interested in the question.

So far as teamwork is concerned, there is still a limit to the point at which the architect can actually interfere with the way in which a building is built. He can consult with the contractor at the early stages but there is a point at which the contractor may say 'You told me to do this, and look where I am now!' It is the contractor's job to run his own contract. We are limited by our code of professional conduct from going far along that line, and while this is so I don't see that complete teamwork is possible.

Perhaps one way in which the architect can help collaboration is by more visits to the site, but when one has a large number of jobs going on, this is difficult to manage.

I should like here to have a little bang at the builders, because I have found in the industry a great lack of desire to experiment. We are living in an advanced scientific age and our buildings are beginning to take account of that, yet we still have nonsense about one man waiting for another to knock a hole in a wall. I find many contractors still long for the 'good old days', but I am certain that they will not come again.

There is great difficulty in creating the team spirit among men on the job when so many sub-contractors appear for such a short time; particularly in the central areas of England and further north, where there is the use of 'labour only' gangs. Men are bound together to carry out certain work, in small units, and they can't have the same interest in creating a fine job as if they were employed by the main contractor or sub-contractor.

I quite agree about the clerk of works. One's senior assistants often have to do work which should be done by the clerk of works.

The Ministry of Works have accepted the principle of selective tendering, and when the matter was discussed by the Association of Municipal Corporations it was decided that if local authorities wished to use the system of selective tendering, as at Newport, it was in order for them to make their own rules.

I agree with Mr. Noel Hill about calling too many tunes. It is important for an architect's office to develop its own detailing. In that way we shall get the individuality of style which we sadly need today. There is too much cribbing of detail; you can see that in the architectural journals. If we don't do something of this kind we shall all be copying each other and doing the same sort of thing.

Mr. Raymond Walker [*L*] said he had earned his living in the building industry for 30 years and for many years had worked for organisations representing firms manufacturing materials for the building industry. He thought it encouraging that the contribution made by these firms was now more widely recognised. There had even been an exhibition of building in concrete at the R.I.B.A. He thought also that architects were beginning to realise the enormous contribution in research which was being made by the manufacturing sections of the industry.

Mr. Walker said he would like to see a closer liaison between architects and the men who made the 'bits and pieces' used in building. He thought it would be helpful if an architect would send photoprints of his first rough sketches to all the people he would ultimately want to quote, so that they could get on with their preliminary work and investigation while he was making his plans. Too often the manufacturer didn't know what would be wanted until the job was actually going up. Then the architect wondered why none of the 'bits and pieces' fitted. He thought there was a very rosy future for architects who were willing to go into the manufacturing side of the building industry.

Mr. J. Gordon Berry, M.C. [*F*], Huddersfield, said that Mr. Sheppard Fidler had quite rightly said that large public authorities had opportunities of research because of their big programmes. They could educate their committees towards selective tendering as opposed to open advertising. But the third method—the negotiated tender—could be explored and developed by the private architect. In many cases circumstances made a negotiated tender almost inevitable, a contract having to be signed and work started before working drawings were complete. This was not experimenting at a client's expense. He would like to hear from other architects of their experience of negotiated tender procedure.

Mr. Berry added that it was perhaps symbolic that in his old drawing office there had been a barrier behind which no builder was allowed to go. In his new drawing office there was no such barrier.

Mr. Graham Crump [*F*], President of the South Eastern Society of Architects, said he had been much impressed by Mr. Woodbine Parish and he thought possibly everyone there had some faint glimmering of what he meant. But he would like to apply it to actual building job conditions. He felt it was for the contractor to have a knowledge of all the various processes, involved, but too often the agent, superintendent or general foreman, or all three turned away from the practical work of fitting together the specialist sub-trades, and a site meeting turned into an organising meeting by the architect. He thought this was wrong.

The question of human relations came into this. He thought it was difficult to interest men on the site but it was possible. He had once tried producing a model for the operatives to see and had been astonished at the interest they had taken in it. But what we needed principally was greater help on the site.

Sir Thomas Bennett here said he thought the question of site meetings being organised by the architect was a matter on which there might be differences of opinion. He himself had found when he was Director of Works that it was necessary for the architect to call the site meetings because he knew what was coming in the future, apart from what the builder had already received. He thought the relevant sub-contractors for those services which would be needed shortly should be present at site meetings and unless that sort of organisation was carried out by the architect it wouldn't be done properly. The running of a job was the architect's business and he wouldn't like to see it become the function of the builder.

Mr. Howard V. Lobb, C.B.E. [*F*]: The thing that has impressed me most about this Conference and the speakers so far is the realisation that the architect, contractor, quantity surveyor, and sub-contractor are all part of the same team. I like to regard that team as a crew, being a sailing man, and we can't win the race of good building —good in design quality, and cost—unless the crew has confidence one in the other, unless each one knows something about the other's job and knows how to act in fair wind or foul.

Clients, whether local authorities, industrialists or people building houses, go often to infinite pains in the selection of an architect and I think the R.I.B.A. can rejoice in the fact that the integrity of the architect is accepted by clients wholeheartedly. What concerns me is that the selection of a contractor is a much more chancy business. We have all deprecated long lists of contractors, resulting in the contractor who has made the biggest mistake getting the contract. I hope we shall be able to persuade all clients not to proceed with that form of contracting, but to have a more selective basis. The difficulty is the problem of deciding with complete impartiality on the ability of different contracting firms and their merits, particularly in a district that is strange to you. Is there any way in which we could get some scheme for classifying contractors? We might then be able to establish in the client's mind the integrity of the contractor too.

I should like to know what the various organisations with which Mr. Woodbine Parish has connections are doing about

contractors' organisation. There should be, it seems to me, a totally different set-up to handle jobs of different sizes, but sometimes the same kind of organisation turns up on totally different sized jobs.

The problem of the training of foremen is important. You can select a foreman and be happy and successful with him, then with the same firm you get a different foreman and get a different job. What can be done to get a higher standard of training for foremen?

On the question of human relations raised by Mr. Woodbine Parish, I have tried to interest everybody in the part they play in a complete building. We have made a model and had it shown on the job in the foreman's office, and with the contractors' permission I have talked to the men in one of their lunch breaks. We have had perspectives put up in mess huts. The result has been a remarkable interest shown by the men; but I have often had to overcome inertia on the part of the foreman to take these steps.

We had this problem of human relations on the South Bank Exhibition. Eleven months before it was due to open we were four months late. We put on an exhibition of architects' drawings and models, and there was an amazing interest and attendance on the part of the work-people. Then I closed the job down one Sunday and gave the workmen a couple of tickets each to go into the exhibition with their wives. We had eight to nine thousand people there. I am sure it was the workmen's wives who got the exhibition open! We often tend to forget the workmen's wives.

Sir Thomas Bennett here said that classification of contractors was one of the big issues which was constantly being raised. There had been an attempt to do it during the war and he had had the duty of controlling a schedule of all contractors then working in the country with details of their jobs and resources. The most important lesson he had learned from it had been that there was far more teamwork between architects, engineers and contractors than is generally believed. But a result of this was that the personal factor was the greatest difficulty in attempting classification. People liked to work with contractors they knew. Sir Thomas said he thought therefore that every office ought to have its own list of contractors, so that the staff in that office knew the staff in the contractor's office. And as firms of standing varied considerably over the years as they changed staff the list ought to be revised and brought up to date from time to time.

Sir Thomas added that far too many firms relied far too much on an individual foreman and too many contractors owed their success or failure solely to his ability. This was a widespread defect of contracting today. Contact from top to bottom through a contracting firm was essential.

Mr. Woodbine Parish: Builders also find the same thing that one of your members complained of earlier—we find that the architect doesn't visit the site and that we are left with an assistant who has no authority to make decisions and wastes time and builds up ill will. This organisational failure exists on both sides.

Sir Thomas has made very clear the necessity for human relations, for contact between all levels, the ability to get on Christian name terms. But if one is always meeting new people one can get to the end of a contract without making real friendships. This comes back to the importance of continuity and stability. The miraculous thing at present is that so much is achieved without undue ill will.

I should like to tell you about one important but not large job with which we were entrusted. The letter of instructions from the architect ran to 8 pages and 47 paragraphs. In it we received the most lucid instructions as to what was to be done through the various persons in the architect's office, the hope was expressed that I might meet the principal and that we might introduce our subordinates to one another. That was one of the happiest jobs I have been associated with. It was very different from getting a roll of drawings with a note to the effect that some were to be amended, the bills of quantities were only provisional and the specification was still in the hands of the printers. That kind of thing is an example of lousy management.

We have our classification of architects too. I have said this before at the Royal Institute and I say it again: for some architects my basic prices have to be increased by 5 per cent because I know I shall be messed about; I know it will be hell untold to get a final certificate. On the other hand I am delighted to have the opportunity of discounting my prices by 2½ per cent for architects who allow me to work with them right the way through a contract.

I think you should have joint chairmen at site meetings. Admittedly the architect is the titular head, but the individual who is taking the commercial risk and is a party to the contract (the architect is only an agent) should take a very leading part in the conduct of site meetings.

Mr. Woodbine Parish said Mr. Lobb was so right in what he said about the acceptance of the architect's integrity and said he would like to see the same acceptance of the builder's integrity. He said that he had been Chairman of the National Committee for the Training of Foremen, and the Committee had done a good deal, but he was not conscious that so much had been done for the training of clerks of works. He thought the R.I.B.A. had a fundamental problem there. We must have good clerks of works. Most of the good ones today were former foremen who had been trained by builders.

Mr. Lobb, said Mr. Woodbine Parish, had also asked for specific information about what he meant by management. Mr. Woodbine Parish referred to a pamphlet published by the Stationery Office entitled *Education for Management* which was the outcome of a committee set up by the Minister of Education and which was published in 1947. This had laid down the syllabus for education and training for managerial responsibility and the syllabus had become almost standard for managerial training throughout the commercial colleges of this country. The British Institute of Management and Ministry of Education jointly issued a certificate and anyone aspiring to management in future should undergo some part of this very detailed course. Mr. Woodbine Parish said he commended this matter to the Board of Architectural Education. Management should find its way into the training of architects because they were managers. Architects were part of the building industry; neither existed without the other. Let us, said Mr. Woodbine Parish, accept this indivisibility. Once that is realised we must remember that some million and a quarter people are concerned with building in this country and that management plays a cardinal part in the industry's well-being.

Dr. J. C. Weston, the Building Research Station: I speak as a neutral in the debate between the architect and builder!

Sir Thomas spoke about the desirability of having reliable and comparable data on costs in different forms of construction. As an example of the kind of information I take it he had in mind, we at the Building Research Station have made a study of the costs of different kinds of construction from the point of view of thermal insulation.

The difficulty is being sure that the conditions for which your price data are obtained are comparable. There is a wide range of efficiency in contracting and design. We have found a range of about 3 to 1 in man hours for building small houses, and also in school building—and there is the same sort of range found in many other industries too. This is bound to be reflected in the price. A contractor won't be equally efficient in all kinds of job. This is particularly the case with new forms of construction. The only way is to observe the job as it is being built and collect data. On the other hand all designers are not equally efficient.

In the case of multi-storey flats, for flats having load-bearing concrete walls we looked at the price of the superstructure and found a range of 2 to 1 between the cheapest and the dearest. Some of the range arises from differences in contractors' efficiency but we found a very big variation in the actual amounts of concrete used. There was three times as much concrete in the most expensive as in the cheapest. I mention these examples simply to illustrate the danger of basing comparisons on too small a sample.

The way out is of course Sir Thomas's way—to collect information from a number of sources, from a number of contractors and designers. But I think you can't wholly depend on the limited amount of work we may be able to do. You have in your own hands the possibility of collecting much cost information. This applies particularly to official architects with large authorities. The priced bill of quantities is not really a suitable form for collecting this information. We must have price data

in a form in which the individual elements of building are separately shown. This may be separate from contractual requirements, but I don't see that with the collaboration of the quantity surveyor there is any great difficulty in getting the information in this form. We must develop techniques of cost analysis. Only then can cost become, together with function and aesthetics, one of the design considerations.

Mr. Alexander Steele [*A*], City of Edinburgh: Mr. Woodbine Parish is very persuasive and I almost feel as though I were a member of the most miserable profession on earth. But on reflection I realise the profession is not so bad.

He says he is greeted on the site by an assistant. But how often does the architect see the managing director? We are faced with an agent who is anxious to get the highest possible profit. I think there is a lot to be done on the contracting side to promote confidence.

The whole question is one of education, under three headings: (1) Education of the architect loses a lot through there being insufficient time given to professional practice and training of the young architect. I make every architect write his own specification but hardly one young architect has a competent idea how to do this. I suggest this is a point for the Board of Architectural Education. (2) Education of the contractual side. There is no industry that has failed so lamentably in the question of education as the building industry. It is ten years since the war ended and various schemes have been tried. With the growth of the very large firm there are no apprentices being produced. We are leaving it to the small firms to take on apprentices. The big firms must play a bigger part. The wage structure is one weakness; there is insufficient incentive to the craftsman. (3) Education of the clerk of works. It is very difficult to get adequate courses and there are few, if any, courses available to the clerk of works. The same training is not suitable for clerks of works and for foremen. I have persuaded my authority to take on young assistant clerks of works and train them up with senior men. The Board of Architectural Education might make some contribution here. Clerks of works are aiming at registration and this shows they are thinking on the right lines.

Mr. J. H. Forshaw, C.B., M.C., M.T.P.I. [*F*], Chief Architect to the Ministry of Housing and Local Government and to the Ministry of Health, said that the matter of costs was very important. He thought we were round the corner and would be able to specify better materials and look for better quality work. It might be wishful thinking, for a higher quality of workmanship was wanted, but this would have to be done with inexpensive materials. The Queen's Speech had made it clear that Ministers would be looking very carefully at public expenditure and we should all have to be on our toes. He thought the solution of better building at a lower cost was probably going to be found in new materials. He thought it was essential to go on with research.

Mr. Sheppard Fidler had spoken about the scope of a large authority with their variety of work for carrying out research. This was true and they were obviously going to influence and direct a great deal of our work in future but they must bring in the private architect to help them.

Sir Thomas had spoken about the changes and advances in the past half century, but he (Mr. Forshaw) thought he should rather have stressed the last ten years and the next ten years. Some of us had been trying to do new things before the war and they had been frowned on. The new things being tried now would come, and many more. It was up to all of us to grasp the present opportunities and go forward with faith.

Mr. Forshaw said he thought a system of selected contractors for particular work was justified but he thought it was not the firms but the work which should be graded.

He agreed with Mr. Noel Hill about calling fewer tunes and hoped other architects would follow his example. There was great scope for training in administration and office direction and he thought the R.I.B.A. and the Board of Architectural Education should look carefully at the curriculum from this point of view.

The Minister of Housing had set a target of 300,000 houses and nearly 350,000 had been built in each of the last two years. But in the past year Germany had built 530,000 with about the same size labour force. It was true that German standards were lower but he did not think the difference could be explained by differences in the size of accommodation and standards of finish. The Germans were ready to work long hours and we had got to get something like that spirit back into industry. How it was difficult to see, but Mr. Woodbine Parish had put his finger on the fundamental thing, the need for more human understanding. For that reason Mr. Forshaw had been sorry that there had been no-one present at the Conference to speak on behalf of the operatives.

Mr. Forshaw said the variation in costs which Dr. Weston had spoken about was very evident in hospital building. The economic cost per unit of accommodation was the important test, not the cost per foot cube.

Mr. W. Allen [*A*], Building Research Station, said that it should be the business of Council and the Committees of the Institute to take action on the many points raised at a Conference. For that reason he was glad to see so many chairmen of committees present. The Science Committee as a result of last year's Conference had taken several actions, e.g. the formation of an Industry Liaison sub-Committee. Incidentally, Mr. Allen said, industry had taken very well the criticisms made of them last year and had shown themselves very willing to co-operate.

As an example of the Institute's co-operation with industry, Mr. Allen quoted the new colour range for paints produced by the R.I.B.A. which had reduced the former lists of several hundred colours to one hundred. This was to be issued as a British Standard. The Government had already begun purchasing on the new range. The paint industry had welcomed the Institute's action.

The question of training for management Mr. Allen thought should clearly be referred back to the Board of Architectural Education.

He was surprised that in all that had been said about the organisation of the contracting side of industry nothing had been said about the small builder employing from five or six men up to 60 or 70, who after all made up the bulk of the industry. His experience was that a number of these small firms tended to go bankrupt, and he wondered if the building industry was able to take any steps to teach these firms the importance of competent management.

Regarding efficiency on the design side, Mr. Allen thought a point which should be taken into consideration was any possible saving which design could contribute to running and administration costs. £1,000 spent in administration yearly represented from ten to twenty thousand pounds of capital and the elimination of needs for staff costing, say, £1,000 p.a. would represent that much saving. Our job today was to make more from less quicker and better.

Mr. F. Charles Saxon, O.B.E., M.C., Vice-President R.I.B.A. and Chairman of the Allied Societies' Conference, said he thought it would constitute a good follow-up to the Conference if the wonderful papers that had been heard were taken as a kind of specification, clause by clause, and discussed by the Allied Societies. They would provide matter for meetings throughout the session.

Mr. Arthur G. Ling [*A*], City and County Borough of Coventry, said he wanted to make two points. The first one was that we were rather overlooking the other partner in the whole process of building—the client. (He also agreed with Mr. Forshaw that the operative should be brought in, and this should be our aim in any study that might follow this Conference). It was necessary to differentiate between the different sorts of client. A private architect's client varied according to the type of work he did. An architect in public service had a local authority or a government department as his client. In some ways the private architect had greater freedom, because if he made a mistake he at least didn't have to live with his client afterwards. At the same time living with one's client could be a satisfying partnership.

It was possible to begin pre-planning at an earlier stage when working for a public authority than when working for a private client, but there was an anomaly, so far as Government Departments were concerned, between the planning side which decided on building programmes for five years ahead and the executive side which worked on a yearly basis. This was particularly the case

with schools. How could proper pre-planning be obtained with only a year's programme allocated? Perhaps we could ask Government Departments if they could have an average programme so that we could look further ahead in preparing programmes. As it was we had sometimes to start working drawings before the Government had even approved a particular project.

Mr. Ling's second point was costs. He thought this subject had not yet been sufficiently studied. There was a vagueness about costing which was holding back new advances in building techniques and materials. The first time a contractor tried out new methods he was not going to pass on the benefit to a client immediately, because there was a risk for him. He had at first to tender on the same basis as for an older method. There was therefore a case for extending the experiment that the L.C.C. had made in working with a contractor on the Picton Street scheme of flats. Here the contractor had had a fixed profit, so that new techniques could go ahead without the contractor taking any risk. Under this system the risk and any saving was shared by all.

Mr. Ling said there had been a lot of talk about tenders coming out very near one another. This was an example either of supreme mismanagement or else a protest by the tenderers against the whole system of tendering. If, after all, all the firms concerned came within the same category of builder and those responsible for estimating were all equally competent and the firms all used the same techniques, why shouldn't the prices come out the same? One could measure materials in a job, but one couldn't measure time and labour.

Mr. Ling thought that only when further experiments had been carried out with a defined profit for the contractor—comparable to the architect's fixed fees—could the whole question of costs be reassessed.

Lieut.-Colonel Eric Cole [*F*] said that no mention had been made in the discussion so far of the non-commissioned officers of the building industry. Architects in the provinces were faced with a great difficulty in the lack of intermediate students and assistants. Nowadays the middle classes could afford or obtain grants to send their sons and daughters direct to architectural schools, and they came out fully qualified. Architects were therefore faced with engaging either young boys straight from school or qualified men. This affected the management of their offices.

The same thing applied in the building industry. Mr. Steele had already mentioned the question of incentives. The trade unions in recent years had done good work in seeing that their men all got good wages, but unfortunately in doing this they had made no distinction between the good and the bad craftsman. Was there any incentive for a young man to enter an apprenticeship in the building industry? And was there any incentive for a builder to take on apprentices?

Mr. John Kean [*A*], said that several speakers had mentioned the question of the follow-up of the conference. He said he believed there was in America an organisation numbering 1,000 representatives of architects, builders, manufacturers, engineers and operatives which met periodically to discuss the very subjects that our own Conference had been discussing. He thought such an organisation would form a suitable follow-up to the present Conference—which he thought had been all too short—and the R.I.B.A. might give consideration to it.

Mr. Kean said he made this suggestion purely as an individual and had no authority to speak for his Ministry on it. But he dared to hope his Ministry would be interested to take part in such a conference.

Mr. Norman Culley [*F*], Huddersfield, who said he spoke not as a member of the building industry but as a poor mere registered architect, said there had been some doubts in the north about the suitability of the subject selected for the Conference. He quoted some words of Sir Thomas: '. . . an attempt to state the extent to which the individual architect, the architectural partnership and the architectural department can fulfil the ideals that the discussion has initiated . . .' and said: Now there is something there rather strange. There is an indication that the architect must work to the ideals of the public. But architecture is still an art, and I think that has been missed out of this Conference. Buildings are not designed and carried out by accountants. Commodity, firmness and delight must still be thought about. Architects are not behind the public in their ideals, but in advance, and must lead and teach the public. Sir Thomas has emphasised his point again by saying that the profession is rapidly travelling along the path the public would have it travel, but I want the public to travel along our path.

On the collaboration of builder and architect, in the early stages of a scheme, how is it possible for a builder, even for Mr. Woodbine Parish, to take part in the expression of the functional purpose of a building project? Surely the builder and management come in when the actual building proposal is going forward. That is when his organisation is required. We appreciate the builder, we appreciate Mr. Woodbine Parish, but we do not want him in at the preliminary stages of getting out a scheme.

On one point I do agree with him. There should be a code of management for architect and builder.

Mr. Rex Procter [*A*] spoke on the question of costs. He said: One factor has been ignored. The cost of building has gone up since the war to four times the pre-war amount, but the amount of capital in the industry has not gone up by anything like that amount. So that we are trying to conduct four times the amount of capital work on twice the capital. The balance of the capital has therefore to be found and there are a number of ways in which this can be done. Of the amount of capita available at any time, between 5 and 10 per cent is tied up in retentions and a further sum is tied up in hidden retentions due to under-certification. That deficiency in capital has to be made from two sources: (1) by borrowing capital; (2) by credit taken from manufacturers, merchants and suppliers. Therefore the capital must be turned over more rapidly to get it back into the industry, and to do this there are two things we must have: (1) certificates must be given promptly and (2) final accounts must be cleared promptly.

These are mostly cleared slowly and it is not the fault of the quantity surveyor. There are often two reasons. First, 90 per cent of the final account is cleared quickly, but for the last 10 per cent we need the final daywork sheets from the contractor and from the architect those variation orders he has failed to issue. It is quite a common thing for an architect to say, 'Well, we know there are a lot of variations. Let us know what they are and we will issue variation orders to cover them.'

The other factor that causes difficulty is that it is most unusual in the case of a large office for the senior assistant who started a scheme to be in charge of it at the end. There has probably been a turnover of two or three people on it, and the man who made the decisions in the first instance is not there to tell you what he intended. It would be a great help in getting capital back into the industry if people would pay a little more attention to the provisions of the R.I.B.A. contract.

Sir Thomas Bennett then summed up the discussion. He said: I have felt personally as the Conference has gone on an increasing sense of realisation of the responsibilities of architects to builders and builders to architects. It has been a pronounced feature of this discussion, and that alone would have justified this Conference if the Conference were to achieve nothing more.

There has been great variation of view on a number of matters, but there has also been much agreement. It has been realised that drawings should be there at the right time but that there are a certain number of contracts which can't have complete drawings and that that is not a thing for architects to complain about but that it is for the profession to find machinery to deal with such contracts.

The question of the right relationship between sections of the industry has been discussed from many angles. We might perhaps start backwards from Mr. Proctor's point that we certify builders so closely up to the final sum but no one finds time to deal with final accounts and recover the last five or ten pounds left over.

I should like to put forward another aspect of this matter of the final account and say that all builders ought to be made to make claims when they think they have occurred and not after the final account is in. I would say they should be made within three months of the end of the contract or not at all. Our biggest bugbear is that we know nothing about claims until an account

The Mayor welcoming the Conference. Left to right, The President, the Secretary, Sir Thomas Bennett and Mr. David Woodbine Parish

has been in for months, when the builder thinks his profit is not quite enough so he manufactures a few claims.

I regret that more has not been said about the employment of specialist contractors and nominated sub-contractors. I still think that is one of the biggest problems in the industry today.

We have had a number of proposals about the methods by which the points made in this Conference should be followed up. It may be the President has already made up his mind about that. Mr. Saxon has made the suggestion that they should be given widespread examination by the Allied Societies and this would admirably bring in different types of practice.

We should pay tribute to the Building Research Station. We have had indications from Mr. Allen and Dr. Weston that they are engaged on research which will in due course be invaluable to the profession.

We have had references to the urgent need for educating clerks of works. This is one aspect of training which the R.I.B.A. might well take in hand. I have had clerks of works complain that they are not the child of any body of people interested in the industry.

We have had references to the recruitment of craftsmen, labourers and foremen. I think it is true that in the last wage rate for the first time we started to improve the differentials between the labourer and craftsmen and the craftsman now receives an extra of 1½*d.* on the differential. When I first began to meet people in the industry outside our own profession I drew attention to the fact that they were preventing good men from coming into the industry because the differentials were insufficient. The newer industries have been much alive to the question of paying skilled men and when they were established early in the century they drew their men very largely from building, which was then the outstanding craft industry of the country. I feel the industry is still losing the entry of the right sort of man.

One speaker referred to large building firms in the country with no apprentices or virtually none. That is unacceptable in any industry. In much of building there is still a need for craftsmanship of the highest order. Probably of all craftsmen in the country the building craftsman is most often left to make intelligent decisions of his own. The bricklayer, the plasterer, for instance, have quite a good bit of thinking to do within their limited spheres.

The discussion has covered a wide field, which shows how very much alive the profession is to the problems of organisation, management and detail. We have not devoted ourselves more to design because no Conference can cover every feature of a profession which is so all-embracing as that of architecture.

Mr. Woodbine Parish, in giving his summing up, said he suspected that he had almost been guilty of preaching a sermon, and if so he apologised. But he felt deeply on the matter which was being discussed.

He agreed with Sir Thomas that in this Conference the profession had taken the first step towards examining the whole process of management. We needed to get an investment of intellect into this problem. We needed to take a little time off from day-to-day business to look at day-to-day business. We must examine the fundamentals behind it. And when we had broken down the mechanics of management we must establish procedure, syllabuses and training programmes. The whole development would probably take 10, 15 or 25 years, but we must make a start, taking short, middle and long-term considerations into account.

Mr. Woodbine Parish said: I am delighted to think that there may be a study group set up on the lines suggested in my paper. The Institute of Builders and the N.F.T.B.E. will give the fullest possible support to the work of such a group.

Building employers are only too well aware of the deficiency in the number of young men training, but are not concerned about their quality. The standards are on the upgrade. The number of young men presenting themselves for the various examinations is between four and five times what it was pre-war. All sides of the industry are becoming more and more aware of the necessity for education and for the recruiting of the right type of young man. Let us hope that we can work together more closely in the future to solve this vital problem.

The President then gave his summing up and said he thought that an appropriate point at which we might make a start in co-operation with the building industry and the allied professions would be to give a list of all items of importance which had been discussed at the Conference to the National Joint Committee of Architects, Quantity Surveyors and Builders.

He thought it had been an extremely good thing to talk about these things with the builders, but he did not think it was a practicable suggestion that we should have had the operatives there too. There was however no reason why the whole discussion should not be widely disseminated.

Mr. E. D. Jefferiss Mathews, O.B.E., A.R.I.C.S. [*F*], Vice-President R.I.B.A., proposing a vote of thanks, said there were three points which he would like to pinpoint. First, he said:

I feel that we as architects must be more aware of our economic responsibility. But in doing that we must not for one moment lose sight of the fact that our work must be good architecture. Architecture is the only art that is wholly an economic one and in that lies the thrill and excitement of attempting to achieve both elements of our job.

Secondly, one theme has been through the Conference. We do look for a little more responsiveness from the contracting side to new ideas, new techniques; and collaboration with us in our attempt to achieve this.

Thirdly, mutual integrity and trust of all partners must be the real hinge on which the success of the industry will depend. Suspicion breeds suspicion. If we accept trust, in 99 cases out of 100 we shall get it and that will be one of the biggest advances in the development and progress of the industry.

Mr. R. A. Livett, O.B.E., briefly seconded the vote of thanks.

The Lord Bishop of Ripon proposing the toast of the R.I.B.A. and its Allied Societies

The Conference Dinner

Mr. Hubert Bennett [*F*], President of the West Yorkshire Society of Architects, proposing the toast of the Borough of Harrogate, coupled with its new Mayor, said he felt sure the visitors' immediate impressions of Harrogate were the sense of spaciousness, of clean moorland air—somewhat cold at times—and the floral setting of the town.

He referred, in this connection, to a recent statement in the HARROGATE OBSERVER that the Parks and Gardens Department had been working overtime to enable nature to bring about its miraculous transformation! He also had a comment to make on a recent note on the agenda of the Cemetery Committee. It was stated that a new site under consideration was not all needed at once but would provide a breathing space for the next thirty years. He now understood the meaning of 'artificial respiration'.

Mr. Bennett said they had been discussing the future organisation of the building industry and the architect's responsibilities. He himself had had little to do but listen to wonderful speeches, and some first-class information had been given. But he had been indulging in some thoughts on Harrogate's future planning and the architectural possibilities of the town and thought a recent answer given in an examination paper might be of interest if the Council thought of building an open-air theatre. The question was: 'Give a comparison between Greek and Roman theatres', and the answer was: 'The Roman theatres were built up from the ground but the Greeks lay about on hillsides anywhere without any conveniences whatsoever'.

Again, if Harrogate were to expand a neighbourhood unit would be needed, and a student had defined this as 'a social structure containing buildings for the number of people that are necessary to fill the ordinary elementary school'.

Mr. Bennett made a comparison between the 'Victorianism' seen in Harrogate and a feature of architecture today which would be familiar to the readers of certain journals under the title 'the new Brutalism', though he would call it the type of architecture usually reserved for the back elevation.

Finally Mr. Bennett gave thanks to the Mayor for the generous hospitality that had been extended to the Conference.

The Mayor of Harrogate, Councillor Robert J. Riley, replying, said: We in Harrogate are very proud of the beauty of our town. It has been greatly favoured by its own natural beauty and we are also indebted to our forefathers who did much to preserve that beauty. When one thinks of Harrogate one thinks first of 'The Stray' and at a time when it is popular to criticise architects and town planners I should like to pay them a tribute. Everything has been done here to see that the character of the town is preserved. The Terylene headquarters building shows how modern architecture can be married into the general picture. The town has built a large number of houses since the war and these have been undertaken in an increasing quantity by private developers, and most of them have been designed by members of your Institute. The Council are now turning their attention to the preservation and modernisation of older property so that the centre of the town doesn't become a rotting core. Members of your Institute have a vital part to play and I pay tribute to them for their co-operation.

The Right Reverend the Lord Bishop of Ripon proposed the toast of the R.I.B.A. and its Allied Societies. He said: I take this as a great honour and responsibility. There is a certain suitability in someone connected with the Church proposing this toast, because there has long been a close connection between the Church and architecture. In the old days there wasn't much house architecture when houses were built of mud, and castles can't have given much scope. But the places where the architects really got going were the cathedrals and churches and later the colleges and schools.

And how they enjoyed it! One feels the builders must have been enjoying themselves when such grand work was done so thoroughly even where it can't be seen. I have lived long in Ely and there in the centre of the cathedral is that wonder of architecture, the Lantern, designed by Alan of Walsingham.

When times got quieter and people could build houses to be comfortable in there came a wonderful chance for architects and they took it. But there was still a link between the two professions, for there has never been a time when churches were not being built. And I am happy to think that the link is still there.

The Bishop went on to say that building a church allowed an architect to express his personality more than did other kinds of building. Quite a number of new churches would have to be built, but they were very expensive today. He hoped architects would find ways of making church building cheaper, using modern ways and materials—but not too modern.

He continued: An association of architects such as yours, sharing the secrets of the profession, is so well worth while. We hope you will be able to go on experimenting. Your President has been a leader in experiment in the field of school building. I hope some of you will experiment in the same way for the churches. I envy you your job. You enter so much into the life of the people through building them houses, schools and churches.

The President R.I.B.A., Mr. C. H. Aslin, C.B.E., replying, said: The Bishop said that the profession of architecture has always been allied to the Church. With that I am happy to agree, but he said one thing with which I must disagree. He said he wanted cheaper churches but not too modern. You can't have churches that are cheaper and not modern. You admire the things built in past centuries. Today I went

Mr. K. M. B. Cross, Hon. Secretary R.I.B.A., proposing the toast of the guests

to Fountains Abbey. We found there something of that quiet spirit which existed when no one expected a church to be built in six months. Basil Spence tells me he is going to finish Coventry Cathedral in five years, and if he does, that will be a tribute to our friends the builders.

I think this is one of the best annual Conferences we have ever had. That is in part due to the charm of this town, in part to the hospitality of the Mayor and citizens, but also to our friends Sir Thomas Bennett and Mr. Woodbine Parish.

The President then said he wished to refer briefly to the internal affairs of the R.I.B.A. There had been some pressure from younger members for the formation of a trade union. Speaking not as President but purely from his own personal viewpoint he did not think that the formation of a trade union within the R.I.B.A. would be desirable even if it were legally possible, but members could rest assured that the R.I.B.A. would pursue a policy of seeing to the demands and needs of its younger members. The re-examination of these requirements would begin the following week, at the Council Meeting on 14 June. He said it was, of course, not to be thought that architects did not care about remuneration. They had to live. But architecture was still an art, and first-class work must still be done for its own sake.

He went on: I have derived very great benefit from this Conference. To listen to our debate has been an inspiration. It has indicated to me two things: one, that this body has not lost sight of the great opportunities we have, and secondly that our friends the builders are obviously equally ready to take part in the tremendous opportunity we all possess. I think we are about to return to the days when designer, craftsman, builder and everyone had as their object the producing of fine buildings. I think we are about to pass from the era when the architect was merely the servant of his client and the builder only wanted to make a large profit. The signs and portents for the future are good.

And here I should like to say a word of reassurance to the Bishop. When we get cheaper churches the people will like them. The simple people are the first to realise it when new things are good. And his flock will in their turn teach the Bishop to like the new churches too.

Mr. Kenneth M. B. Cross, Hon. Secretary R.I.B.A., proposing the toast of the guests, said that when it was first known that the Conference was to take place at Harrogate everyone had experienced a thrill of one kind or another. Some had thought of the old city where the three Ridings met, of the famous Minster with the Five Sisters window, of Beverley and Ripon, of Byland and Riveaulx. Others had thought of the great plateau on which it stood, of the wolds, the hills and dales, the rugged sea coast and the variegated and magnificent countryside. Others again had thought of George Hirst and Wilfred Rhodes and that famous Test Match which they won 'in singles'. And all, no doubt, had thought of that special pudding which goes with roast beef and of cheese and that remarkable ham. All had looked forward to their visit and none had been disappointed.

Mr. Cross went on to say that though architects were all individualists, with never a 'yes-man' among them, all tonight were unanimous in giving a warm welcome to their many distinguished guests.

The Lord Mayor of Leeds, Alderman Sir James Croysdale, replying, said that it would be impertinent for him to say anything about architecture, knowing nothing about it. But he could say that Leeds was an example of the worst the Industrial Revolution had done to a town, and it could be seen how today the City Architect and his colleagues in Leeds were overcoming these defects.

He said that someone had once said that architecture was frozen music. Of course everyone had different tastes in music. He was not sure himself whether some of the architecture he saw from time to time was frozen Beethoven, frozen Bartok or frozen Be-bop!

As regards the building of churches, he could not but think of Wordsworth's words, 'They did not dream of perishable homes who so built'. One of the difficulties of architects today was that they were often required by municipal authorities to build buildings which were not intended to be permanent. In the case of schools, for instance, this set a new problem for architects.

The Lord Mayor concluded by quoting Byron's words to describe the present gathering—'courteous hosts and all-approving guests'.

The Franco-British Union of Architects' Congress 1955

THE 26th annual general meeting and congress of the F.B.U.A. was held at Besançon, France, from 27 May to 1 June. The annual general meeting was held at the Hôtel des Perces-Neiges, high up in pine forests of the Department of Doubs near the Swiss frontier. The following British and French members were present: M. Boutterin (Vice-President), M. Bodecher, Mme. Bodecher, M. Barade, Mr. G. A. W. Brandreth [*A*] (Hon. Sec. British Section), Lt.-Col. O. Campbell-Jones, T.D. [*F*], Mr. P. Campbell-Jones [*A*], Lt.-Col. Cart de Lafontaine, O.B.E., T.D., P.P.T.P.I.[*F*] (Secretary-General), M. Duflos, M. Fabre, M. Laprade, Mr. S. Loweth, F.S.A. [*F*], M. A. Schneider (Hon. Sec. French Section), M. Tournon, Membre de l'Institut (Past President), Miss O. Winter [*A*]. Letters of regret for absence were received from Mr. H. S. Goodhart-Rendel [*F*] (President), Sir Patrick Abercrombie, F.S.A., M.T.P.I. [*F*], (Past President) and Prof. A. E. Richardson, R.A., F.S.A. [*F*].

Monsieur Boutterin (Past Grand Prix de Rome), Vice-President, was elected President for the year 1955–56 and Prof. A. E. Richardson was elected Vice-President. The following were elected members: Reginald Cave [*A*]; Bernard George [*F*]; Charles Cable [*F*]; Patrick Campbell-Jones [*A*]: MM. Dameron, Labro, Klein.

It was decided that an exhibition of prints of working drawings for modern buildings of various types, by French members, accompanied by photographs of the buildings, should be held in London this autumn. The Secretary-General explained that this would be an exhibition 'by architects for architects', and it would probably take place at the Architectural Association in October next. The proposal was accepted and it was suggested that a similar exhibition of British working drawings should be held at the rooms of the Société des Architectes Diplômés in Paris.

It was also decided that the next annual general meeting should be in London, in June 1956, with visits to the new towns of Crawley and Harlow.

Among other matters discussed were the continuation of the annual travelling bursary for a French post-graduate student of the École des Beaux Arts and the annual competition between students of the École des Beaux Arts and of the British schools of architecture. In this year's competition 78 sets of drawings were received from various British schools The awards were:

1st prize and £25, R. H. A. Verspyck, Bartlett School of Architecture, University of London. 2nd prize, R. Crownshaw, Department of Architecture, University of Sheffield. 3rd prize, A. J. Mole, Bartlett School of Architecture, University of London. 4th prize, Miss B. Wallhouse, Bartlett School of Architecture, University of London.

Hon. Mentions: R. B. Burnett, Leeds School of Architecture and Town Planning. D. J. Birnbaum, and B. C. Ericson, both of the Bartlett School of Architecture, University of London.

These drawings (with those by students of the École des Beaux Arts) have been exhibited in Paris. They will be on view at the R.I.B.A. from 18 to 25 October.

During the four days of the meeting many historic buildings in Besançon were visited, including the old Parliament of the Franche-Comté, the cathedral, the triumphal arch of Marcus-Aurelius, the Citadel and the 18th-century theatre, by Ledoux, a new university building in course of construction at Dijon, designed by M. Barrade, and many other things of interest.

Among the official receptions was a 'vin d'honneur', given by the Mayor and Council of the City of Besançon at the Hôtel de Ville, a reception by the Prefect of the Department of Doubs at the Prefecture and an official banquet.

Practice Notes

Edited by Charles Woodward [*A*]

MINISTRY OF HOUSING AND LOCAL GOVERNMENT. Land Transactions of Local Authorities under the Town and Country Planning Act 1954. Circular 34/55 dated 31 May gives guidance to local authorities and statutory undertakers in respect of land transactions and the compulsory purchase of land.

In the memorandum attached to the Circular it is stated that where, as part of the cost of acquisition, the acquiring authority is paying the full amount of an unexpended balance of development value, the ascertainment of which required no new valuation, no reimbursement of any professional adviser's fees incurred by the vendor should be allowed on that part of the compensation. Where a new valuation is needed to arrive at the amount payable in respect of the unexpended balance, however, that may be taken into account in calculating the fees to be reimbursed. In some cases, although the professional adviser will have performed some new valuation services, a full-scale contribution would be excessive, and in such cases the District Valuer will advise on a contribution commensurate with the services rendered. (*Note*. The Circular does not appear to be available at H.M. Stationery Office.)

HEIGHT OF FENCES. An owner erected a wood fence 6 ft. high along the front of his property and adjoining owners objected and protested to the local Council. An inquiry by correspondence was conducted by the Ministry and the Minister decided that a householder is entitled to reasonable privacy for his house and gardens if he so wishes, and neighbours have no prescriptive right to views across his land. The Minister was unable to agree that a well-constructed wood pale fence is open to objection on the grounds of appearance, and the mere newness of the timber is a feature that will mellow in time. The fence does not obstruct the visibility of traffic and does not block out any notable landscape view which it might be desirable to retain in the public interest. (THE ESTATES GAZETTE, 4 June 1955.)

NATIONAL JOINT COUNCIL FOR THE BUILDING INDUSTRY. Handling of Dry Cement. As from 4 July the National Joint Council has decided that the period of continuous employment necessary to qualify for extra payment in handling dry cement is to be reduced from one full working day to one hour. The extra payment is due only in respect of each hour during which an operative is engaged in the operation.

MINISTRY OF HEALTH: First New Hospitals since 1939. 'Models for the Future.' 'After a gap of over 16 years we are on the threshold of building new general hospitals in Britain again,' said the Minister of Health, Mr. Iain MacLeod, addressing the Annual Conference of the Association of Hospital Management Committees at Hastings on Friday 17 June.

Mr. MacLeod said that he hoped very shortly to be able to announce the complete list of those new hospitals to be included in the expanded capital investment programme covering the two years 1956–7 and 1957–8.

During the first seven years of the Health Service, the hospital authorities had largely had to be content with 'make do and mend' so far as capital work was concerned. It was a question of stretching existing resources to the uttermost by repairs, adaptations, conversions and extensions. In this way over 60 million pounds had been spent and this sum had produced a long and varied list of improvements which had enabled the hospital service to meet with increasing flexibility the ever-growing demands upon it.

'Now, at long last, we can take a big step forward,' said the Minister. 'Paper plans are going to be translated into actual structures embodying all that is considered best in modern methods of construction, design and layout. We believe these new hospitals will be worthy to take their place among the best examples to be found in this field of architecture.

'So that we shall have at our disposal knowledge of what is best in modern practice both in this country and overseas, I have set up a special study group of my architects, doctors and engineers. The aim, I would emphasise, is not to design standard hospital buildings for all occasions, but to make available to all concerned the latest information and guidance on the many aspects of hospital design. At present the group is studying the design of operating theatres.'

LAW CASES. Landlord and Tenant Act 1954. Application for new lease. This case concerned an application by a tenant for the grant of a new lease. The existing lease had been terminated by a notice by the landlord as provided for in that lease. The tenant was not willing to give up possession and claimed a new lease for 14 years.

Under section 30 (1) (*f*) of the 1954 Act the landlord may oppose an application for a new tenancy on the ground that he intends to demolish or reconstruct the premises or a substantial part or to carry out substantial work of construction and that he could not reasonably do so without obtaining possession of the building.

The landlord has obtained a building lease of a site which included the tenant's holding, and in order to erect the new building under that building lease he required possession of that holding.

The Court decided that there was no discretion provided that the conditions set out in section 30 (1) (*f*) were satisfied. The landlord in this case proposed to enter into a contract with a demolition contractor which included demolition of the tenant's holding. The Court was satisfied under section 30 and refused the tenant's application for a new lease. The Court said that a landlord's 'intention' can quite well be shown by entering into a contract with a demolition contractor. (THE ESTATES GAZETTE, 4 June 1955.)

Nuisance from Piano Playing. In this action by the plaintiffs claiming damages and an injunction against the defendants, the next-door neighbours, to restrain them from allowing excessive noise to emanate from their house arising from music pupils practising the piano, defendants and their family playing and practising and through the excessive loudness of a radio and gramophone, the defendants denied that the acts complained of constituted a nuisance and claimed in the alternative that they had acquired a prescriptive right to continue them by twenty years' enjoyment, the piano lessons having commenced in 1933. The plaintiffs complained that the nuisance really dated from 1946.

The Judge, in giving judgment for the plaintiffs, said the noise was an interference with the ordinary physical enjoyment of the plaintiffs' house and the thin party wall was no defence. There had been a nuisance only since 1946 and there was no reported case where a right to commit a nuisance had arisen by prescription. There would be a judgment for 40*s*. and the injunction asked for, subject to a suspension for one month. (THE ESTATES GAZETTE, 25 June 1955).

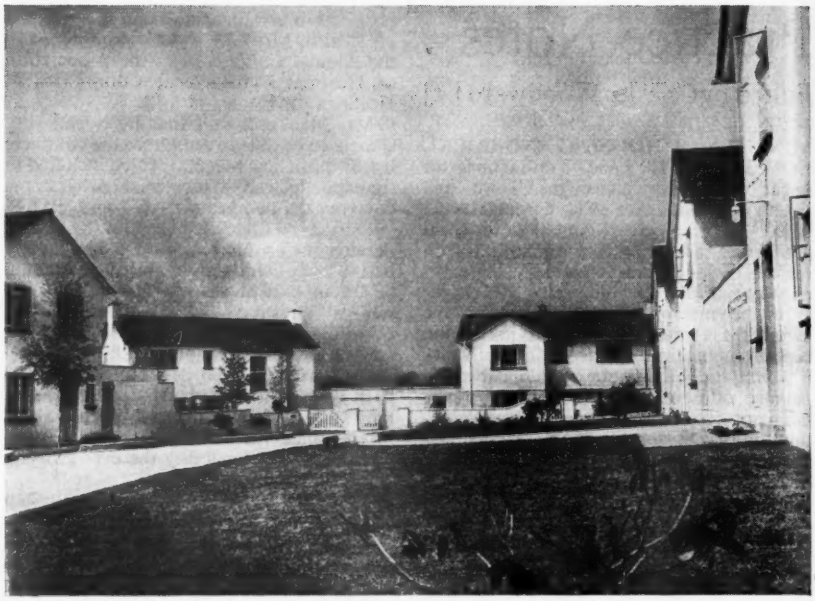
(*Note*. The claim of a prescriptive right in this case makes one wonder what the servient owner could do to prevent the acquisition of such a right. The interruption for one full year in every twenty years would still leave the servient owner with 19 years' nuisance, a year's break and then a resumption of the nuisance which would not be much satisfaction. To say that the right was being acquired surreptitiously would not appeal to the reasonable man unless he was deaf, and in any event would not stop the nuisance. And would the dominant owner really 'enjoy' the twenty years' discordance arising from backward pupils which he would have to endure? And must the 'enjoyment' be continuous? According to the evidence in this case the piano playing plus violin practice amounted to 982 hours during a year, and this ignores the radio and gramophone. Is this continuous 'enjoyment' on the part of the dominant owner? And would it be relevant to suggest that the payment received by the dominant owner for the music lessons might make it difficult for him to submit that he was acquiring a prescriptive right without payment?

The case raises issues which are far-reaching and can only be settled by the highest tribunal in the land. In the meantime the servient owner will have to endure noise which is not 'excessive,' whatever that may mean. The courageous advocate who submitted the intriguing defence will at least have the satisfaction of having raised an interpretation of a prescriptive right which has never been raised before. Will it ever be raised again? And can a prescriptive right be acquired to quietness?)

Housing Medals 1955

THE 1955 awards of housing medals and diplomas offered by the Minister of Housing and Local Government for the best designed schemes of private enterprise houses and improvements and conversions in England and Wales have been determined on the recommendations of Regional Awards Committees.

This is the first time since the competition was inaugurated in 1950 that awards have been made for private enterprise housing and for schemes of conversion or improvement undertaken by local authorities or private persons. The number of schemes submitted was 432; ranging from single houses and groups to a converted smithy and a modernised 16th-century farmhouse of historic interest.



Houses in Orchard Close, Ottery St. Mary, Devon. Antony Lamb, A.M.T.P.I. [*A*]

Private Enterprise Competition

Northern. 'Green Acres', Troutbeck, Nr. Windermere, Westmorland. Jennings and Gill [*L*/*A*]. Builder, J. Storey, Troutbeck, Nr. Windermere. No. 6 Parkside, Tynemouth, Northumberland. G. Hall Gray [*F*] (G. H. Gray and Partners [*F*/*A*/*A*]). Builder, Hastie D. Burton Ltd., North Shields.

East and West Ridings. Grey Court, Manor Park, Scarcroft, Leeds. J. Stanley Wright [*L*], The Building Centre, Brunswick Terrace, Leeds. Builder, J. C. Kettlewell, Tadcaster, Yorks. Linton Lane, Wetherby, Yorks. Hubert Bennett [*F*], Linton Lane, Wetherby, Yorks. Builder, L. Garbutt Ltd., Aberford, Yorks.

North Midland. No. 9 Heath Avenue, Mansfield, Notts. Henry J. Mein [*A*], 26 Clarendon Street, Nottingham. Builder, John Harvey, Chaucer Street, Mansfield, Notts.

Eastern. Nos. 4, 6, 18, 20, 22 and 24 Reddings, Welwyn Garden City, Herts. Paul Mauger and Partners [*F*/*A*], Parkway Chambers, Welwyn Garden City. Builder, G. Davies and Sons (Broxbourne) Ltd., St. Margarets, Nr. Ware. Leeks Hill House, Melton, Woodbridge, East Suffolk. Sandon and Harding [*A*/*A*], Commercial Union Buildings, Princes Street, Ipswich. Builder, F. Ingram Smith Ltd., 3 Quay Street, Woodbridge.

London. No recommendations.

Southern. 52 New Yatt Road, Witney, Oxon. Gerald Banks, Dipl.Arch. (L'pool.) [*A*], Witney, Oxon. Builder, Roy Smith, 14 Taphouse Avenue, Witney. No. 59 Wyke Road, Weymouth. E. Wamsley Lewis, A.A.Dipl. [*F*], 70 St. Thomas Street, Weymouth. Builder, Marshallsay and Rashley, The Stalls, Chickerell, Weymouth.

South Western. Golden Meadow, Gulval, Nr. Penzance. Peter John Barbary, M.B.E., G.M., T.D. [*A*] (Geoffrey Bazeley and Barbary [*F*/*A*]), 15–16 Alverton, Penzance. Builder, Wm. Trathen, Green Lane, Redruth, Cornwall. Eight houses at Orchard Close, Ottery St. Mary, Devon. Antony Lamb, A.M.T.P.I. [*A*], 2 Prospect Place, Ottery St. Mary, Devon. Builder, E. Hansford and Son, Hand and Pen, Whimple, Devon.

Wales. 'Tanglewood', Llantrithyd Road, Bonvilston, Glam. W. H. Maton [*A*], Llantrithyd Road, Bonvilston, Glam. Builder, L. J. Hope Ltd., 68 Pantmawr Road, Whitchurch, Cardiff.

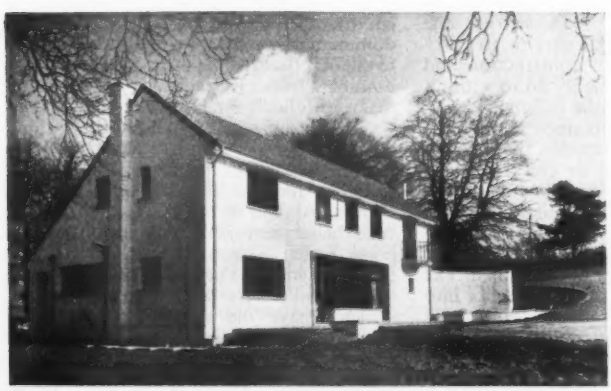
Midland. 72 Gorsey Lane, Cannock, Staffs. Laurence Williams [*F*] (Wood, Kendrick and Williams [*F*/*F*]), 57 Colmore Row, Birmingham, 3. Builder, Darby Bros., Beech Tree Lane, Cannock.

North Western. 'Ribby Wood', Ribby Road, Wrea Green, Nr. Kirkham, Lancs. T. Mellor, B. Arch. (L'pool.), A.M.T.P.I. [*A*], 8 Market Hall, Lytham St. Anne's, Lancs. Builder, James Matthews, Rutland Road, Ansdell, Lytham St. Anne's, Lancs. Ecton Avenue, Macclesfield, Cheshire. Bernard Taylor and Associates [*A*], Market Place, Macclesfield, Cheshire. Builders, H. Berry and Sons, Prestbury Road, Macclesfield, in co-operation with W. H. Colt Sons and Co., Ltd., Bethersden, Kent.

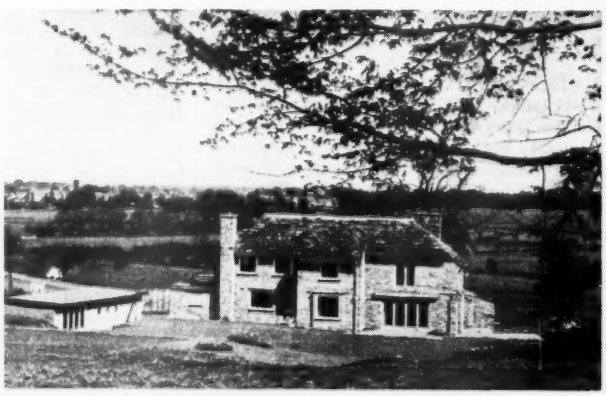
South Eastern. No recommendations.

Improvements and Conversions Competition

Northern. 'Martin Garth', Hutton Bushel, Nr. Scarborough. Edgar Allen [*A*], Halifax



'Tanglewood', Bonvilston, Glam. W. H. Maton [*A*]



Linton Lane, Wetherby, Yorks. Hubert Bennett [*F*]

'Ribby Wood', Wrea Green, Nr. Kirkham, Lancs. T. Mellor, B.Arch. (L'pool), A.M.T.P.I. [*A*]

No. 52 New Yatt Road, Witney, Oxon. Gerald Banks, Dipl.Arch. (L'pool) [*A*]

Ecton Avenue, Macclesfield, Cheshire. Bernard Taylor [*A*] and Associates

Golden Meadow, Gulval, Nr. Penzance. P. J. Barbary, M.B.E., G.M., T.D. [*A*]

Leeks Hill House, Melton, Woodbridge, East Suffolk. Sandon and Harding [*AA*]

Chambers, 32 St. Nicholas Street, Scarborough. Builder, H. Readman Ltd., 4 Gladstone Lane, Scarborough.

East and West Ridings. No recommendations.

North Midland. No recommendations.

Eastern. Avenue Mansions, No. 29 Yarmouth Road, Lowestoft, East Suffolk (East Suffolk C.C.). E. J. Symcox [*F*], County Hall, Ipswich. Builder, W. Ames Ltd., 43a Market Place, Gt. Yarmouth, Norfolk. Kempston Grange, Kempston, Nr. Bedford (Kempston U.D.C.). John Gedge [*F*], 32a High Street, Bedford. Builder, Samuel Foster Ltd., Kempston, Bedford.

London. No recommendations.

Southern. The Old Smithy, Bloxham, Oxon. G. Forsyth Lawson [*L*], 30 Horse Fair, Banbury, Oxon. Builder, P.R. Alcock and Sons Ltd., Castle Street, Banbury, Oxon. The Row, Bletchingdon, Oxon. Thos. Rayson [*F*], 29 Beaumont Street, Oxford. Builder, C. B. Hathaway and Son Ltd., 18 York Road, Headington, Oxford.

South Western. 5 Somerset Lane, Bath, Somerset. Hugh Duckworth Roberts, A.A.Dipl. (Hons.) [*F*], 7 Brook Street, Bath, Somerset. Builder, Chas. Ingram and Son, Upper Lambridge Street, Lorkhall, Bath, Somerset.

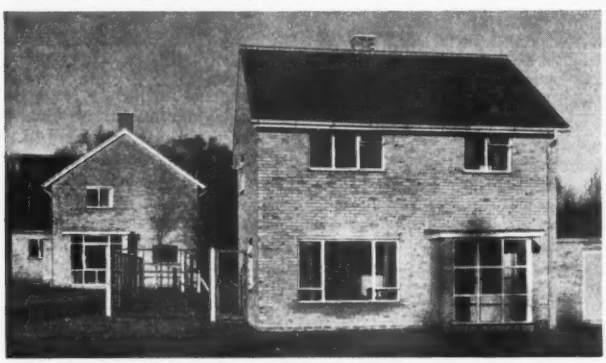
The Row, Bletchingdon, Oxon, after improvement. Thomas Rayson [*F*]

Wales. Hafod Yspytty, Ffestiniog, Merioneth. M. T. Pritchard, Dip.Arch [*A*], Bryn Marian, Church Street, Blaenau Ffestiniog, Merioneth. Builder, Mark Sontag, Mallorca, Spain.
Midland. Nos. 95–107 Gilman Street, Hanley, Stoke-on-Trent (Stoke-on-Trent C.C.). J. R. Piggott, T.D. [*F*], Kingsway, Stoke-on-Trent. Builder, H. Plummer, Public Works Manager, Public Works Dept., Wharf Street, Stoke-on-Trent. Stonepits, Inkberrow, Worcestershire. T. R. Bateman, A.M.T.P.I. [*A*], 21 Vine Street, Evesham. Builder, R. Barley and Son Ltd., Inkberrow.
North Western. No recommendations.
South Eastern. Nine estate houses considered as a group on the Cowdray Estate at Cocking, Lodsworth, Easebourne, Midhurst, and Cowdray Park. W. J. Aggas, Little Todham, Midhurst, Sussex. Builder selected for award, Works Dept., Cowdray Estate, Midhurst, Sussex.

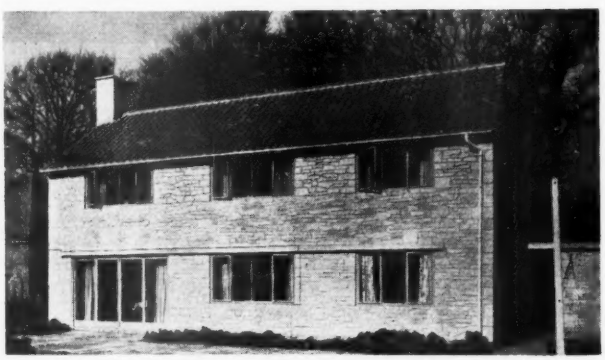
The medals and diplomas were presented on 20 July at the R.I.B.A. by the Minister of Housing and Local Government, the Rt. Hon. Duncan Sandys, M.P. A report will appear in the August JOURNAL.

No. 5 Somerset Lane, Bath, after conversion. Hugh Duckworth Roberts, A.A.Dipl. (Hons.) [*F*]

Stonepits, Inkberrow, Worcs., after conversion. T. R. Bateman, A.M.T.P.I. [*A*]



Houses in Reddings, Welwyn Garden City, Herts. Paul Mauger and Partners [*F/A*]



No. 59 Wyke Road, Weymouth. E. Wamsley Lewis, A.A.Dipl. [*F*]

No. 6 Parkside, Tynemouth, Northumberland. G. Hall Gray [*F*]

Grey Court, Manor Park, Scarcroft, Leeds. J. Stanley Wright [*L*]

Above left: Green Acres, Troutbeck, Nr. Windermere. J. Colman Gill, B.Arch. (L'pool) [*A*]. Above right: No. 72 Gorsey Lane, Cannock, Staffs. Laurence Williams [*F*]

Left: 'Martin Garth', Hutton Bushel, Nr. Scarborough, Yorks, after conversion. Edgar Allen [*A*]. Right: Kempston Grange, Kempston, Nr. Bedford, after conversion. John Gedge [*F*]

Hafod Yspytty, Ffestiniog, Merioneth, after conversion. M. T. Pritchard, Dip.Arch. [*A*]

The Old Smithy, Bloxham, Oxon, after conversion. G. Forsyth Lawson [*L*]

Sociology and Architecture

By Professor Charles Madge, Faculty of Commerce and Social Science, the University of Birmingham

Read at the R.I.B.A. on 14 June 1955, the President in the Chair.

FIRST I SHOULD like to pay homage, as a non-architect, to the profession of architecture. Other people have pointed out, among them Dr. Bronowski when he spoke to you in March, that the architect is both scientist and artist, and also he must be something of a politician and a man of affairs. I really believe that the architect in our time has a better chance of being a whole man than most. When other occupations are in general becoming more one-sided, architecture is becoming more many-sided. One only needs to look at the curriculum of the schools of architecture to see that this is so. You find there aesthetics and mathematics, physiology and sociology, the study of materials and structures, the practice of design and the history of design; and all this is tested against the realities of costing and that special branch of human relations which consists in the relationship between architect and client.

Architecture, I believe, is riding trimly on the crest of the wave of urban industrial civilisation and is flourishing in that civilisation at a time when institutions are ossifying and arts are wilting. I am sure this is because it is based on human many-sidedness. One might suppose that mastery of so many kinds of knowledge and skill must lead to one of two things—dilettantism or a nervous breakdown. I honestly believe that there are very few dilettanti in the profession, and, so far as I know, very few nervous breakdowns. There is on the contrary a great deal of work done and a great deal of work satisfaction. I feel fairly sure that the creative nature of the work supplies the architect with an energy that other occupations do not tap.

Among the subjects which architects are interested in is sociology. I realise something of the extent to which it has impinged on you already, both in the schools of architecture and in the professional journals. A whole generation of architects was brought up on the works of one sociologist in particular, Lewis Mumford, and especially on his book *The Culture of Cities*. The spreading out of architectural interest from churches and palaces to the urban environment as a whole has inevitably brought architects face to face with one social dilemma after another. Moreover, architects have turned to sociologists for help in these problems. I myself have had the stimulating experience of collaborative work with architects. What American sociologists would describe as the interaction that has taken place between architecture and sociology has indeed led to some disillusionment on both sides. I do not think we need to regret this, because the shedding of illusions is in general a good thing, provided always that it does not lead to a neglect of what is left after the illusions have been shed. I, too, have been disillusioned. That is why I think you can take my tribute to your profession as a genuine tribute, not based on idealisation or wishful thinking.

Architecture is concerned with many other branches of human knowledge besides sociology. And sociology is concerned with many other aspects of human activity besides architecture. Today I want to consider Sociology as a whole and Architecture as a whole and to see what they may have in common. This, I think, will be less tedious for an occasion like this than a detailed survey of sociological information, or of methods for getting information that might be useful to an architect.

I want, however, at this point, to apologise for the non-visual nature of my subject. It seems a great pity to be talking to an audience of highly-developed visualisers without showing slides or using visual illustrations. Even Dr. Bronowski was able to conjure up for you images ranging from cave paintings to the Dome of Discovery. I have not been able to think up any illustrations, but I am going to take a poet's licence and fall back on a metaphor, which each of you can visualise as you please.

The word 'sociology' was first coined something more than a hundred years ago by Auguste Comte. His conception of society is summed up in a sentence from Pascal which he quoted as a motto: 'The whole succession of men, during the long series of ages, should be considered as One Man, who continues to live and who continually learns'. This is reminiscent of a phrase in a book by Marx about 'the activity of a whole series of generations, each one standing on the shoulders of those preceding it'. Within this vivid image of social continuity there lurks another, that of society as a building. In the same way, the Christian Church is visualised both as a lofty cathedral and as the body of the elect. In the sociological writing of our own time the images of structure, framework and pattern are constantly being invoked. One might almost say that sociologists are trying to discover the architecture of society.

Society is, of course, an odd sort of building in that it is constantly being rebuilt. It is always possible that it stands on the site of other buildings which have disappeared. It certainly incorporates old materials put to new uses, and its construction represents a continuous compromise between past and present needs. It is, however, to my mind essential to consider it as a unity both in space and time: as the combined and cumulative performance of the human species during its history. To quote Aristotle, whom I would call the real originator of sociology as of so much else: 'Just as in discussing a house, it is the whole figure and form of the house which concerns us, not merely the bricks and mortar and timber; so in natural science (he could have said, also in social science), it is the composite thing, the thing as a whole, which primarily concerns us, not the materials of it, which are not found apart from the thing itself whose materials they are'.

Although Aristotle is here emphasising the importance of the *whole*, these words are from the introduction to his biological treatise, *De Partibus Animalium*, on the *parts* of animals. He is really telling us that unless we are prepared to make a patient study of details, that is to say of separate parts and their interrelations, we shall never rise to a proper conception of wholes. He is in fact advocating the scientific attitude, and some words from this passage are quoted with approval by Robert Boyle in his book *Of the Usefulnesse of Natural Philosophy*. I must not get too caught up with Aristotle, but I cannot resist recalling to you the story which he tells at this point in order to emphasise that nothing is too mean or lowly for science to investigate: how some visitors once wished to meet Heracleitus the early Greek philosopher, and when they came to call and saw him in the kitchen, warming himself at the stove, they hesitated; but Heracleitus said, 'Come in; don't be afraid; there are gods even here'.

Both sociologists and architects must be prepared to find gods in kitchens, and indeed a kitchen would make a good mutual rendezvous. A sociologist, or an architect, who considers such an area as unworthy is, I would suggest, not to be trusted with the larger and grander tasks. There is indeed one view of the function of sociology which regards it, in the words of Karl Popper, as being no more than 'piecemeal social engineering'. Anything more ambitious is regarded as dangerous to individual rights and the open society. I do not agree with this; I think that the sociologist should have large views and should start from a sense of history and historical movement. This need not involve the vices of what has been labelled as 'historicism', or a belief that certain trends in the past must inevitably be projected into the future. There is nothing inevitable where human destinies are concerned. But we must surely be capable of rising above the mass of piecemeal detail, of seeing beyond our noses, of seeing both the wood and the trees. I feel that many architects will understand what I mean when I say

that what we most need nowadays are people who have genuinely large views and also a genuine feeling for detail, which means first-hand experience in as many different contexts as possible.

The important thing here is an adequate time-scale. I claim no originality in pointing out that while the history of mankind is thought to date from between 500,000 and 250,000 years ago, settled agriculture probably dates from only 10,000 years ago, the earliest towns from 5,000 or 6,000 years ago, and the industrial type of town which now dominates the scene only dates from about 250 years ago. Reverting to the metaphor of society as a building composed of generations standing on one another's shoulders, this means that the industrial turret in which we stand is at most about one-thousandth part of the whole, measured on a time-scale. At the same time, we must also remember the extraordinary increase in the total population of the world during these past 250 years, and also that it is only during that time that all the areas and peoples of the world have become an inter-dependent whole. It is this last one-thousandth part of human history which dominates us; and its dominant feature is industry.

Our great industrial achievement is based on economics and engineering. These involve what is sometimes called a 'realistic' approach to the environment and its problems. A realistic approach is, as a rule, a simplified approach. *Realpolitik* is a form of politics which considers certain kinds of force as more real than others. Economics in practice considers certain kinds of good as more real than others. Engineering in practice considers certain kinds of function as more real than others. To sociologists and architects, reality is considerably more comprehensive, though we do well to recognise the potency of economic forces and of their ally, the engineer. Indeed architecture and sociology have to try to be 'realistic' in order to make their way in the present century. As a result they have, I think, managed to maintain their point of view that social man includes but extends beyond economic man and that building includes but extends beyond engineering.

I want to contrast what I consider a right view and a wrong view about the changing standards and values of human history. I can illustrate this either sociologically or architecturally. In architectural history, tastes have changed so that, for instance, at a certain stage of development gothic architecture was no longer esteemed and its place was taken by classical and baroque. When the old St. Paul's Cathedral was destroyed, a splendid but quite different kind of building took its place. But no one, I think, wants deliberately to pull down Westminster Abbey and replace that by a building in the style of the Festival Hall. That must be because the aesthetic and moral conceptions of the builders of Westminster Abbey have significance for us alongside of those of the architects of St. Paul's and the Festival Hall. In the same way we inherit from the Middle Ages the feudal values of nobility, gentleness and honour. We do not want to construct any more feudal systems, but some of the values that arose from them have an endurance beyond the power-structures of the past.

I say, *some* of the values. We can no more accept the past as a whole than we can reject it as a whole. We are constantly struggling to escape from the past, and I am of one mind with those who view with horror the insidious infiltration of false imitations of the past into the present. In sociology, this can be defined as snobbery; in architecture it is the fake antique.

We all recognise that in some ways children are more attractive than adults. They impress us as more spontaneous, affectionate and imaginative. The innocence of the young has seemed more striking as civilisation has become more hard-boiled and chromium-plated. These values of spontaneity and innocence we select from others less appealing. It is possible to see, for example, in the child the unmitigated effects of original sin; destructiveness, aggressiveness, self-centeredness, unlimited greed. Yet the balance which happy children reach between good and bad has a simplicity which adult compromises lack. In the same way, it seems to me most probable that mankind reached its happiest stage of balance when the first miseries of the fight with nature were overcome and before human groups had begun struggling among themselves for wealth and power. What I have seen of tribal villages in India and peasant villages in Siam has confirmed this idea of mine that there really was once a golden age of primitive felicity. But I am also sure that this was no *natural* state of affairs: it represented an early victory over nature, both physical nature and human nature. This early victory was not permanent, and mankind has had to renew the fight again and again, every time on a new plane of complexity.

We cannot revert to the first golden age of agriculture, any more than we can avoid the process of growing up. We have to accept those two great social and technical inventions, the town and the factory, which together have so rapidly changed the world and made it what it now is.

What, then, are the right view and the wrong view about our changing values? The wrong view, I am suggesting, can take the form either of iconoclasm or of snobbery: essentially it consists in a failure to distinguish the values themselves from the conditions which generated them. The only conditions that are relevant to us are our own conditions. But many values which arose under quite other conditions have an independent and autonomous meaning for us. So in order to have a right view about the past we have a double task. First, we have to understand and appreciate our own conditions. And second, we have to recognise and perhaps reinterpret those parts of our heritage from the past which have a persisting value.

In terms of architecture this means, of course, that while our own architectural style should fit the conditions of our own time, yet structures built under other conditions may still speak to us in a language which we can poignantly understand, without necessarily believing it to be timeless or eternal or outside this world altogether in the Platonic sense.

The conditions under which we live, economic, technological, political, are changing fast and the change has every appearance of being uni-directional and irreversible. In a sense, technology, or the power of man over physical nature, is at the root of all this. In Marxist terms, the forces of production produce the social relations of production and these in turn produce beliefs and ideologies. But changes in social relations are slower than changes in technology, and changes in belief are slower still. These are like a series of cog-wheels each larger, and therefore revolving more slowly, than the last. I believe myself that there is a sense in which social and political change depends on technical and economic change and that changes in ideas, especially in moral and social attitudes, depend in their turn on the social and political trend. To this extent I am a Marxist but like most sociologists I also accept the view of Max Weber that most important systems of ideas have their own autonomous development. The degree of autonomy may vary. In the case of aesthetic styles and in all questions of taste, I believe the degree of autonomy to be very high—which does not preclude, of course, all sorts of interesting connections between aesthetic developments and other contemporaneous developments.

If the arts did not have an autonomous value, how is it that we can be moved by productions as far removed in time as those of the Stone Age, as far removed in space as those of China and Japan? The impression is instantaneous, even though it may take us time and patience to learn the language fully.

The revolution in Soviet Russia involved a rejection of the economic relations then obtaining, and of the political institutions that went with them. It also implied a rejection of bourgeois and feudal ideas. These ideas are still being hunted down with a view to their eventual extermination. Yet many of the virtues that are encouraged in Russia are, in a sense, bourgeois virtues or even feudal virtues. Ancient buildings are preserved, and paintings treasured. The conventions and traditions of music and ballet are respected and cherished. The Russian Orthodox religion, and other religions too, have persisted and are even being helped to survive—for how could they survive as they do without substantial help from the State? It is hard to explain all this in terms of Marxist theory but fortunately that theory, too, has its contradictions and its paradoxes. It has appeared on the whole that the post-revolutionary Russians have done better as social than as artistic innovators, while in the field of culture in its broader sense they have been good conservatives. They have seemed more capable of appreciating the aesthetic and cultural languages of the past than of creating a new language suitable to their

own conditions and of enduring significance. This is due, I think, not to iconoclasm but to that partial blindness which comes from too much economics and engineering. Neither sociology in a liberal sense nor architecture—which I regard as the essential complements to economics and engineering—can be said to be flourishing in Russia at the moment. It is the industrial revolution, rather than the Bolshevik revolution, which is to blame. One has to remember that the Russians have crammed their industrial revolution into one tenth the time we took over ours. However humanistic its impulse, it has embodied itself architecturally in forms that are grandiose and empty in a way that can be paralleled in America and in Britain too. In Britain and America, however, creative architecture has survived and one need not suppose that it has gone for ever in Russia.

But there are some immense problems here, enough to daunt the most determined optimist. These largely centre, I would like to submit, on a new and peculiar relation between the rate of socio-technical change and the life of buildings. The development of industry and the growth of population compel the expansion of cities and communications. But industry is restless, for ever changing its location, its processes, its products. The claims of industry are insistent, they trample down other claims, even the claims of humanity and piety. It is only later, when economic imperatives have receded, that we take in the extent of the damage. It is only now that we appreciate the problem bequeathed to us by the crude multiplication of factories, and of the people to work in them, and of the houses for the people to live in. To take housing alone, it is a need we have never caught up with, a need therefore so compelling that we are still meeting it in ways which we know by experience to be wrong—like the great post-war housing estates round London for example—and which are only aggravating the problems we already have on our hands.

Ever since the industrial revolution set a new tempo for urban growth and social change, we have been working under heavy pressure, trying to combine the development of new technical possibilities with the rectification of past mistakes. Our record is a patchwork of success and failure, but looking at the contemporary urban landscape as a whole, who can doubt that failure is more conspicuous than success? Never before have so many buildings been erected; never before have so few deserved to survive.

The cheap houses of 70 or 80 years ago were so shoddily built that already many have collapsed and more go down in every gale. Nobody wants to keep them standing and therefore over great areas, as in Birmingham, reconstruction schemes are in progress. But a great deal of Birmingham is, alas, all too solidly built for any idea of replacement to be feasible. In our great cities we must reconcile ourselves to living for generations with these crude and inconvenient monuments to the vigour of economic forces. And, incidentally, while the Londoner has pre-industrial buildings to remind him of pre-industrial values, in many industrial cities these either never existed or have disappeared.

The architect, after a century of uncertainty, seems to have developed a language which is both beautiful and functional. His best buildings do much to redeem the mediocrity of the urban environment as a whole. Nor can one doubt that this language will be intelligible to future generations, even if these generations themselves are building in quite a different way. But there is still a problem about the life of buildings, and of all kinds of construction, including railways and roadways and airfields and all those miles of service pipes and wires which, once laid down, are so expensive to re-route that they have to be accepted as virtually inflexible elements in planning.

In a crowded country like Britain there is all too little room for manoeuvre. Yet technical inventions in the near future may make today's construction as obsolete as yesterday's. Can we devise an architecture and a method of town planning which is better adjusted to an era of rapid change? Can we contrive structures which will be temporary without being shoddy? Can we reconcile the idea of structural transience with lasting aesthetic significance? These are some of the questions to be explored, and there are, of course, some architects already exploring them. But the idea of permanence in building is itself strongly established, and is likely to outlast its own functional justification.

In every Siamese village there is a space set apart for the Buddhist religion. It is called the Wat. It has a surface of swept sand, it is planted with trees for shade and fruit and it contains a number of buildings, often very beautiful in design and decoration. Here the statues of the Buddha are kept, here the monks live and here the people come to hear them preach. Few of these buildings are as much as even a hundred years old. They are built of brick, plaster and wood but not for permanence. Until quite recently, there were craftsmen in every village who were able to replace the decaying buildings by others at least as beautiful. Now the traditional skill is waning: the new temples are both more permanent and less beautiful than the old. This is a case where the continuity of an aesthetic tradition is more important than the life of any particular building. And more important still is the continuity of the Buddhist religion, which the aesthetic tradition has grown up to serve.

This brief excursion to Siam—which you must excuse because I have recently returned from spending a year there which I very much enjoyed—brings me back to sociology. I have so far avoided a definition of that somewhat contentious word, but for my present purpose I think I would define it as the study of those elements in human society that are persistent and recurrent. You may call such elements associations, or social institutions, or systems of social interaction, or the social relations of production. They range from the family to the R.I.B.A., from the Church of England to the darts club. Their membership may change but they remain, and their activities are in part controlled by written and unwritten laws and customs. It is their continuity which has made possible the development of separate societies over time, and the evolution of the Great Society as a whole.

These associations require a space within which to operate and normally this space includes a building or buildings. Sharing a space in common is often the basis of an association. By obtaining a space or a building or both for its activities, an association helps to insure its continuity. This is clearly the case in the examples I chose, in a club or a Church, in a professional association like the R.I.B.A. or in any ordinary family. Of course it is possible for an association to move to a new space or building, but while it is in occupation the physical milieu does substantiate its claim to corporate existence. A family without a home is like a professional body with only an accommodation address: it has not fully arrived. I understand that there are many families in council flats which are in a hurry to augment themselves so as to become eligible for a council house and thus achieve full family status. No doubt there are associations which are searching both for members and for premises, and for whom to have the one is helpful in getting the other. Thus deeply are associations and locations entangled, and this indicates an important part of the common ground between sociology and architecture.

I agree with what Dr. Bronowski said to you in March, when he opposed the separation in the contemporary mind between science and art. In this he is a good Cambridge man, following as I do the lead of my Cambridge teacher, I. A Richards, to whose splendid essay, *Science and Poetry*, I would refer anyone who is interested. I am also inclined to think that sociology has more in common with literature and the arts than any other science and that architecture has more in common with the sciences than any other art. However in the interests of clarity and logic we must distinguish the function of sociology, which is primarily the *study* of society, and the function of architecture, which is primarily the *design*, *construction* and *maintenance* of buildings. The discipline which for architects would be exactly parallel in function with sociology would consist in a combination of building research, archaeology, art history and architectural criticism: in other words, the assessment of buildings, past, present and future, in all their aspects. There are of course many people whose job it is to design, construct and maintain associations, but in carrying out this job they are not sociologists: they are club leaders, businessmen, politicians, priests and parents, among a host of others. The distinction I am making, you see, is between those who carry out projects and those who assess results and possibilities.

Of course in practice the distinction becomes a little blurred. Most architects must at times be critics and researchers in their field, as well as practitioners. Sociologists find themselves at times called upon to legislate and administer. It is worth mentioning that Auguste Comte himself, when he invented the word sociology, really believed in a world virtually ruled by sociologists, and in Marxist Russia the same idea is given another twist by simply giving to Soviet leaders the title of sociologist, on the grounds that their policies are bound to be based on a deep study of the works of Marx and Lenin.

I do not take this position. I would see the task of sociology as one of social observation and criticism, of bringing unknown or neglected social facts to light and of clarifying influential social concepts. To carry out this task, a degree of non-involvement is to my mind essential, and I do not see therefore how, at the present stage of history, a sociologist can at the same time be a politician. The most he can do is to help to inform and enlighten both the politician and the public, and thus reduce the confusion of aims and, incidentally, check up on the results of intended reforms. For example, I am sure it is the province of the sociologist to check up on such things as national housing policy, and the dispersion of industry and population. Here again his interest overlaps with that of the architect.

Of the two, the architect has the more complete and to my mind the more satisfying role, in that he not only studies a given situation but is active in devising means to meet it. Of the sociologist the best that can be said is that in the long run he may aid those forces which are likely to make politicians more creative, more scientific, in short, more like architects.

DISCUSSION

Sir Patrick Abercrombie, M.A., D.Lit., F.S.A., M.T.P.I. *[F]*, who moved a vote of thanks to Professor Madge, said: Professor Madge has been very kind to architects this evening. One rather expects a sociologist to come along and ask, 'Where is your civic survey? How much information have you gathered before putting up a building or doing a piece of town planning?' He has definitely, as he said, avoided describing these details or giving us heads under which a survey should be prepared. He has considered the whole subject of architecture and the whole subject of sociology side by side.

It is interesting that at the beginning of his paper he talked about what an architect stands for, why he should have certain special virtues, and what are his special functions in society today. And on this very function, we were considering this afternoon a formula that has been proposed by the International Union of Architects. It defines the role of the architect in present-day life. I am not at liberty to give you this summary of the ideal of an architect because it has not been published yet. It is to be issued at The Hague in July. But it is surprising how closely a sociologist—thinking about what the architect is supposed to do and about the variety of our occupation—has come to this summary; the two epitomes of the architect's job approximate to each other.

He has made it clear, and I think we all agree, that one of the virtues of our profession is that we are not just artists. As architects we *are* artists, but we are something much more complicated. The French writer Sartre has described our work and the work of other artists as he thinks they should be and as we *must* be—as committed to serve the community. We are not just here to compose artistic creations for our own delectation or for that of our friends. We are more fortunate, shall we say, than a sculptor who is inclined to look to remote antiquity, 5,000 years ago, and take logs of wood and shape them to look like human beings; or to twist bundles of wire and turn them into monumental creations! Nor, as poets, do we sit down and think of something completely out of our own heads. We have to satisfy actual needs; and therein lies, I think, the strength of our art.

Professor Madge has said the arts are wilting. That is a very bold statement to make today, when there is so much interest in painting and poetry and sculpture and music. But I think I know what he means: that if you try to turn those arts to a social use, as has been attempted in Russia (and he has said a good deal about Russia), they are inclined not to produce works of art at all. They are inclined to be damped, to be daunted, by the social task that is today before us.

Architecture has always had to serve a social purpose. We have to produce places for people to live in. That is how we came to exist in the first instance. Men wanted something a little better than a cave, so we had to produce huts. Having started to produce huts, we became interested in what they should look like. Then, as he pointed out to us so interestingly, the question of change and permanence and the tempo of architecture comes into operation; and there has always been, as he has hinted but not said as definitely as I am going to say it, a tendency for architects to look backward and think of the past, whether they believe in the past or not. Architects today are continually turning their eyes to the past in their newest creations. So in the days of Greek architecture, building in a magnificent and lovely clean-cut marble, they were obsessed with old wooden forms of construction.

That is, I think, one of the difficulties that dogs our profession. We have the past; we must observe the past, as Professor Madge has told us. At the same time, to imitate it is absolutely fatal.

We are in the position that we are living in an industrial age, and we have to satisfy industry. I always feel myself as he has, I think, suggested in the contrast he has drawn between economic Determinism and Platonism, that economic determinism is stressed a little too much in many walks of life today. It is wrong to think that merely by the satisfaction of these economic needs, the need for structural soundness, for wonderful roads, and so on, we can and shall produce a satisfactory sociology or philosophy of life. We must have in our minds sometimes—indeed, very often—these twin ideas fighting for mastery.

There we have, on the one hand, the need to satisfy industry. Industry, as Professor Madge has pointed out, has been with us for a comparatively short time. But it is the dominating element of life today. I sometimes feel quite sad when I read of some obscure country that has been brought from a state of primitive life, an agricultural existence perhaps, into the orbit of modern industrial life.

Are we happier with this great industrial development? I do not know that we are. One thing Professor Madge has pointed out to us is that housing has not caught up, and it never will catch up with these great industrial developments.

Another thing which he did not emphasise so much is that when a nation embarks on a great industrial career, the tendency is for industry to become what is known as heavy industry. Light industry is not sufficient, but the more heavy industry you create the more difficult it is to get rid of it. It is too permanent. There is only one final way out of the over-production of heavy industry, and that is war.

We are caught up in the race for industrial development which has seized hold of the world. Even agriculture is industrialised in order to create enough food for the teeming and increasing populations that live in the towns.

As a town planner, I am not going to say that I am against towns. But one does feel that all one can do is to make the best of a very difficult job in our urban expansion. That is part of the lesson of the most interesting comparison Professor Madge has drawn between urban expansion in modern life and the greater simplicity of the past. To my mind, Pascal hit the nail on the head, and I slightly disagree with Professor Madge when he says that Pascal's remark about the whole succession of men during the long series of ages being considered as one Man, is reminiscent, or a foretaste of, Marx. It means the opposite. Marx thinks of man as a seething mass or great collection of social groups, each standing on the shoulders of the ones preceding it. Pascal points out that the single unit, or Man, is the essential feature. We lose the essential divine element of man if we think of a crowd, as a crowd has not, generally speaking, the element of divinity in it. Thus then we are faced with this spiral on which we are embarked. We cannot help ourselves, just as an artist cannot help himself. He has to go on producing something new; he has to go on producing something distinct; he has to go on producing something fresh. We are in that position today. It is only by studying the whole science of sociology and the history of mankind that we can hope to produce something really worth while in this development of modern technology.

You will remember Geddes who lived at

the dawn of the new era of technology. He was a complete optimist. He thought the old bad technology of the early industrial age was being swept away and we were embarking upon a new technology, neotechnics as against palaeotechnics. Now that the new technics have gone further into the atomic age, we are beginning to wonder whether in the end the position is going to be as happy as Geddes hoped. It is impossible to say; but I do think the discourse we have heard today should stimulate us and make us realise that the role of the architect in this modern life is to create something out of the difficulties in which we find ourselves. This is of the greatest possible importance.

Professor Madge has drawn the distinction which we have so often drawn—and it has sometimes annoyed people—between the architect and the engineer. The engineer is really interested in technique and technics, pure and simple. The architect should and must and does introduce that other element of Platonic ideas. That is where we feel the modern architect and the course of study he embarks upon is of such enormous importance. Therefore the best background for an architect to be brought up in is in the surroundings and neighbourhood of a university, where he can be brought into touch with all the various aspects of human life which Professor Madge has touched upon, confining himself of course more strictly to sociology than to biology or chemistry. The education of the architect cannot be too broad today.

Again you will remember Geddes's oftenquoted warning of the danger of getting to know more and more about less and less. The case of the architect is the very opposite. He has to know more and more about more and more, not less and less. He is continually widening his outlook and views upon life and upon technique.

I agree with Professor Madge—he did not say so in so many words, though he said some very nice things about us—that we have not yet arrived at the final creation of a modern style in architecture. We are well aware that we ought to do it, and I think the element in art, of beauty as well as utility, is gradually emerging out of this new type of architecture in which we have shed so much of the past, though we are still chained to the past in essential features.

Mr. Michael Young (Institute of Community Studies), who seconded the vote of thanks, said: It is an honour for me as a sociologist to second this vote of thanks to Professor Madge. Professor Madge is, I think, unique in being both a poet and a sociologist. He is therefore extremely well fitted to throw out a bridge between our two subjects, as he has done so well tonight.

He distinguished between the functions of architecture and sociology when he said that the function of sociology was to study society and the function of architecture was to design and construct buildings. If you follow this distinction a little further, it becomes clear that whereas you as architects are continuously concerned with values, concerned to discover and then to incorporate the best in your building, you are making judgements of value all the time. We on our side as sociologists are committed primarily to the advancement of knowledge wherever it may lead, and we aspire at least to avoid judgements of value in the work that we do.

If you come to us and ask us, say, to find out what sort of people display King Charles spaniels in china in their front windows, or to find out what sort of people use their parlours merely as household shrines, we will do our best to find out. But in the course of doing so, we will at least try to make no judgements about the people we are investigating. We will not say it is a pity that these people prefer china spaniels to real spaniels, it is a pity that these people do not use their parlours more for doing home-work in. In other words, we aspire at least after scientific purity in our results.

Where we cannot avoid judgements of value, of course, is in the choice of the research we do. Unfortunately for us—and I am sure it is a problem that we share with you—we cannot decide what sort of work we shall do according to what we want to do. Instead, it is other people who give us our commissions and tell us what we shall do, and it is their judgements of value which really determine the problems that we are put on to investigate.

The result of the work we have done over a number of years at the bidding of our sponsors is that we know a great deal more about the little oddities of society than we do about its grand design. The Colonial Office, say, is very worried about the problems of colonial students and other colonial people in Britain, so they put sociologists to work, and we have a large number of studies of what is a tiny minority of people in the country. Or the Home Office is worried about crime, and so we have a whole series of studies about delinquency. If you, sir, ask us to find out something about the 120 people who did not do what they should have done in your election, whom we heard about this evening, we will do our best to do so.

As a result of this sort of thing, however, we know a good deal more about the abnormal than we do about what might be called the normal. We know more about the small than the big, and we have very little chance, far less than we might like, to relate the parts to the whole. Our trouble at bottom, I think, is that our masters are so often specialists. As Professor Madge pointed out, you as architects are far less specialised than many other professions. We, like you, want to know more and more about more and more, and it would be enormously encouraging to us as sociologists if more architects would commission more work to be done by us. If you gave us that encouragement it would help to create a grander sociology that would be more concerned with the big and less with the small, and perhaps it might also even be a slight help to yourselves.

Mr. F. Kerr [*A*]: Professor Abercrombie remarked that architects look back traditionally into the past. My feeling is that this is sometimes due to the economic factor. You cannot build extraordinary houses today for extraordinary clients unless you realise that you are likely to have somewhat extraordinary prices from not extraordinary builders.

This is no reflection on the form of architecture that we know today as contemporary. But contemporary architects are perhaps a little hasty. I may be talking through my hat, but I believe the onrush of feeling about contemporary architecture is such that there are occasions when architects want to throw aside all tradition.

Economically, that is not a possibility. The simple reason is this. If you put out to tender with a contractor or a series of contractors and get your prices, the prices will be based on what has been done before. The contractor has his own building team. He knows what they can do, and he knows how to price it.

I had an instance only nine months ago of a young architect who was asked to design a house of unusual design. He got out some very beautiful plans. To an architect—and every architect is in a sense a purist from the common man's point of view—the design was excellent. That is my humble opinion. But he had an awful job to find contractors to tender, and the price rose up to something like £10,000. The area of floor space was under 1,500 sq. ft. In the long run, the only people who could give a price were a firm of caravan builders in Croydon!

Miss Elizabeth M. Denby [*Hon. A*]: As a sociologist myself, I should like to feel that Professor Madge was being a little more optimistic than perhaps he really feels. I agree so strongly with Sir Patrick whose wisdom and knowledge of life always seem to me to reach to the root of contemporary problems.

Speaking as a sociologist, I am very closely concerned, really only concerned with working-class people or people without much money; and that, of course, now brings in many professional people. I do feel that we are faced with an opportunity as sociologists, as architects and as town planners which is quite unique in the history of Britain.

I feel—and I had the opportunity of saying this just before the war—that we have an opportunity of rebuilding the shattered life of Britain which was shattered in the industrial revolution. Much of the work which architects and town planners are doing today shocks me as a human being to the very depths of my being.

When I see vulnerable working-class families being put into great blocks of flats with limited access only to the ground surrounding them, the men working in factories in hordes, going back to live in hordes, with increasing leisure and with decreasing opportunities of spending that leisure constructively at home, I feel that we as human beings are being given an opportunity which we are meeting wrongly.

We should now, ten years after peace, be trying to deal with it more constructively, much more humanly, than I see any chance of our doing at all.

Architects and town planners, if you will forgive my saying so, often want a clean slate. They want comprehensive development. In this hall very recently Sir William Holford said he felt comprehensive development of central areas was a good thing and was really the only thing to work for, from satisfactory town-planning standards. I think that humanly that is wrong. Comprehensive redevelopment of an area which is old-established and which is dear to the people who live in it very often breaks the last threads with their ancestors, their kinsmen and so on.

Michael Young, whose work I know and respect very much, has, I think, got hold of a fundamental point in part of the work which he is doing in Bethnal Green. That is, he is urging all the time the importance of rehousing people in the areas where they are born and bred, where their kinsmen are, where they want to live. It is extraordinary, with all the jokes about mothers-in-law, how often a young girl wants to live near 'Mum'.

I do feel that rehousing by wish and not by need should be considered much more from the human angle than it is at present.

Miss Jocelyn Adburgham [*L*]: Many people have said that architecture reflects the mind of the times. I think myself that that is true, because one sees periods where architecture has been brought into being when the country concerned was enjoying prosperity. Today we really do not enjoy prosperity, and we are repeatedly told that we do not by the Government and by the Press. Therefore, it must have a bearing on architecture, as expressed in the 20th century. I do not think the architects can be blamed for that. After all, we are subject to instruction and we do suffer bitterly at times from repression.

What is vital is that there should be an understanding of the need to bring buildings into being in these times of financial stress which will still add to the civic distinction and the architectural success of the environment in time to come. Otherwise, we shall be going through the whole system of obstacles again in pulling down and replacing in another generation or so.

To see how true it is to say that architecture reflects the mind of the times we have only to look at other countries outside our own. One sees in the Asiatic countries, for example, a whole lot of idioms and details which do not obtain with us. They express the subtlety of the Asiatic mind, a kind of subtlety that does not enter into our minds at all. I feel that that sort of thing should not be stamped out by dint of our planning and housing policy in this country being introduced wholesale into areas such as Africa, India, or wherever you like.

We need to stimulate what we might call the soul of architectural understanding, so that results vary in different parts of the world, and we do not get the stereotyped results that we tend to obtain because of our control through financial complications, regulations and mandates which are inclined to reflect on the work and output of the architectural profession just now.

Mr. B. Bednarczyk: Professor Abercrombie said that architects should know more and more about more and more. I think it is fatal if they know so much more than the man in the street that he cannot understand them. It is the man in the street, the common man, that Pascal and Professor Abercrombie were talking about, who is also the client, who should know more and more about more and more. This man is both a politician, a sociologist, an architect, and all the other professional men who form our society. An architect is only the servant of the client and society. He sometimes does what he wants to do, but usually he just does what he is told and what he has to do as proposed by his client.

Mr. M. V. F. Poore [*A*]: May I take up a point which we have rather missed? Professor Abercrombie pointed to the extreme left-wing Marxian attitude of man as a seething mass. He contrasted it with the Pascalian attitude of man as an individual, as the whole man. But surely neither of these conceptions quite meets the case in society today.

I entirely agree with the point of view so ably presented by Miss Denby that the individual should be considered, but surely the individual has at the same time a duty. He may not like it, but he has a duty to the State and the society into which he is born. We as architects can perhaps carry out our own particular part of that duty a little more adequately by doing something at which Professor Madge hinted.

Professor Madge said that there was a tendency today to build much more permanently than in previous ages. We do that partly, I think, because of developments in technique: we are able to build to last more easily and more efficiently.

I should like to put forward this proposition. We should build to last for our long-lasting and comparatively unchanging organisations, such as St. Paul's. But for the changing unit, such as the school where educational technique changes so rapidly, or the factory where industry changes, or the building for the family where the unit changes more rapidly than we realise, we might build for the time only and leave our permanent buildings as a record to our descendants of our unchanging institutions.

Mr. M. H. Cooke-Yarborough [*A*]: I am very weak on economics and I hope Professor Madge will correct me. But I have a feeling that if we are to put up a building that will last ten instead of 60 years, it must cost one-sixth of the one which would last 60 years. It may be that I am wrong. So far as I can see, the buildings put up to last ten years cost initially rather more than those to last 60 years, although it is very much quicker to put them up.

As for the possibility of building for a stated period, it seems to me that unless you live in a balloon, the structure of which breaks down at a given moment, the whole thing exploding, you are, for part of your time, living in a structure which is inevitably deteriorating. During that period, it is not a satisfactory structure. I do not know whether Professor Madge has any proposals. The war-time prefabricated house is probably a case in point.

Professor Madge: I only want to say that it is always a stimulating experience to get together with architects. I am afraid that too many hares were raised in my paper for it to be possible to hunt them very far. But I did get the impression that you are just as conscious as I am of some of these problems, particularly this problem of the perhaps excessive durability of so much of the building we have all round us.

I do agree that there is an economic limit to the short life of the building. Unfortunately, the most convenient building materials, or at least the ones which we use most, do last a pretty long time. But as a layman I have dipped into your journals and talked to you enough to know that there are materials and methods of construction which do not involve covering very large spaces with very large masses of very indestructible masonry. I have a hope that between now, perhaps, and the end of the century it may be possible to have some building developments of a less over-permanent kind, and therefore that our past will weigh less oppressively upon our children and our grandchildren.

I do hope we shall be able to maintain this link which undoubtedly does exist between the fields of sociology and architecture. It is certainly very good for people in the somewhat nebulous field of sociology to come to grips with anything as practical and as demanding as, shall we say, a subject like housing. It is a subject where they can, in the words of one of the speakers in the discussion, to some extent help to improve the link between the architect and the man in the street or perhaps not so much the man in the street as the family in all its different manifestations. There, of course, as Miss Denby said, we have work such as Michael Young is doing in Bethnal Green and a good deal of other work. Such work must go on all the time, because the family is very changing, and here, of course, we come to the whole problem. It is partly through the activities of architects and through the activities of planners that some of these changes in the family, in the behaviour of the family, and in the wants and needs of the family are brought about. They are introducing change. Even the sociologist, perhaps, can help to see just what that change amounts to. In other words, there should be action and reaction and playback constantly going on, if the professions of architecture and sociology are to remain closely enough in touch with this very complicated and vital fabric of society.

Review of Construction and Materials

This section gives technical and general information. The following bodies deal with specialised branches of research and will willingly answer inquiries.
The Director, The Building Research Station, Garston, near Watford, Herts. Telephone: Garston 2246.
The Officer-in-charge, The Building Research Station Scottish Laboratory, Thorntonhall, near Glasgow. Telephone: Busby 1171.
The Director, The Forest Products Research Laboratory, Princes Risborough, Bucks. Telephone: Princes Risborough 101
The Director, The British Standards Institution, 2 Park Street, London, W.1. Telephone: Mayfair 9000.
The Director, The Building Centre, 26 Store Street, Tottenham Court Road, London, W.C.1. Telephone: Museum 5400 (10 lines).
The Director, The Scottish Building Centre, 425–7 Sauchiehall Street, Glasgow, C.2. Telephone: Douglas 0372.

Thermic Boring. It sometimes happens on building sites that holes, or perhaps openings, have to be bored or cut out in existing concrete. It can of course be done by apparatus of the pneumatic drill or jumper type, but this causes a good deal of vibration (not to mention noise), and in certain circumstances this may be very undesirable. In any case reinforcing rods are not easy to deal with by such methods.

A system of boring which gets over these difficulties may not be generally known to architects, although it has been to civil engineering contractors for the past few years; it is called 'thermic boring', and may be said to melt both the concrete and the reinforcement. The apparatus comprises a 'lance', lance holder, a supply of oxygen bottles and tubing to connect the oxygen to the lance holder. The lance is consumable and consists of mild steel tubing, such as gas or water piping, into which an appropriate number of soft iron wires are inserted, their number varying with the size of the tube, which itself is governed by the size of hole required. The method of operation is as follows.

The point of the lance is pre-heated, by such means as an oxy-acetylene burner, and when it has reached the necessary temperature the oxygen supply is turned on and is fed through the lance, thus promoting fusion at the lance point, which is then applied to the material to be penetrated. The heat generated at the point of the lance fuses both the lance and the concrete, the flow of the resulting slag being assisted by the molten metal of the lance. Any steel or reinforcement met with is penetrated at the same speed as the concrete, indeed its presence facilitates the process.

Horizontal holes up to 15 or 20 ft. deep can be bored without difficulty, but when boring vertically the critical depth is about 10 ft., after which a special means of removing the slag has to be used and then a depth of 20 ft. or so can be bored. The normal speed of horizontal penetration is in the region of 1 ft. in a minute and a half. Holes from 2½ in. up to 4 in. diameter can be bored.

Although more expensive than the older methods, the system has advantages in being noiseless and free from vibration; the equipment is mobile and does not call for a compressor or expensive and cumbersome plant; operation is easy and quickly learnt; the speed of operation cuts down labour costs.

The necessary equipment can be obtained from Messrs. M. Semet and Company Ltd., of 21 Suffolk Street, Pall Mall, London, S.W.1.

Building Research. The D.S.I.R. have published the report of the Building Research Board for 1954, including the report of the Director of Building Research. Reference is again made to the financial aspect and the Board believe that the building industry should give more direct financial support. All who know, and have profited by, the work of the B.R.S. will agree wholeheartedly with the Board's statement that they would 'view with alarm any failure in the ability of the Station to keep pace with needs and with the demands made on it'.

An interesting line of research is that dealing with the absence of damp-proof courses in old houses. Various suggested methods for compensating for the lack of a damp-course are being assessed and the N.F.B.T.E. are collaborating in making practical trials of promising ideas. It has been found that lime-cement mortars offer a surprisingly high resistance to the capillary rise of moisture in brickwork.

Nearly half the inquiries received were about building materials, including cement and aggregate and the concrete made from them; and the ordinary domestic chimney was the subject of many inquiries.

The report is published by H.M.S.O., price 4*s.* net.

Lighting in Buildings. The Illuminating Engineering Society have published a revised version (1955) of the I.E.S. code for lighting in buildings. In this new edition the presentation and material have been improved and it includes data on glare. The needs of architects, as well as those of lighting engineers, have been borne in mind and the Society hopes that architectural schools will use the code as a basis for teaching. The I.E.S. Code Committee includes members of the B.R.S. staff, on whose work the part on natural lighting is largely based.

Part 1 deals with light and sight, the mechanism of seeing, the importance of differences of brightness and colour, glare and lighting environment. Part 2 covers the selection and location of light sources.

Part 3, on natural lighting, should be of particular interest to architects as it has been written mainly for them. The main headings include the approach to computation, distribution of light, reflected light, location and design of openings, sky and interior (the balance of brightness), followed by important recommendations. New features include lighting to give good modelling, window and top lights. Appendix 1 gives a schedule of recommended values of illumination; appendix 2 is a bibliography, and appendix 3 lists relevant British Standards.

The scales of daylight factors and of illumination show graphically the recommended values of illumination according to the apparent size of object detail to be seen. Each scale is graduated in colour on columns, A, B and C, and this allows assessment to be made of the part played by colour or reflectivity, and the contrast by which objects are easily distinguished from their surroundings. Another interesting chart is that giving a comparison of typical lighting systems in respect of diffusion, brightness and utilisation efficiency, based on direct, semi-direct, general diffusing, semi-indirect and indirect installations.

The code can be obtained from the I.E.S., 32 Victoria Street, London, S.W.1, price 5*s.* net.

Damp and Decay in Masonry. Messrs. Szerelmey Ltd., of 273–277 Rotherhithe New Road, London, S.E.16, have marked the centenary of their firm by the issue of a booklet, *The Cause and Cure of Damp and Decay in Masonry*; it is the ninth edition and has been brought up to date. Some years ago an investigation was carried out into the causes of dampness in dwelling-houses, to help the medical profession in finding the reasons for the prevalence of certain diseases. Expressed in percentages the main causes were listed as follows; condensation, 2·0; bad drainage of subsoil, 5·9; absence of, or defective, site concrete, 14·4; lack of maintenance 18·3; lack of, or defective, damp course, 26·6; direct penetration of rain through walls, 32·8.

The booklet describes and illustrates various causes of dampness and suggests how Szerelmey products can help to overcome them.

Bitumen and Fire Risk. It is probable that architects may sometimes wonder whether it is wise to use bitumen in a building in positions where it can be reached by a fire, in case the result should be that the bitumen may soften and finally ignite, dropping burning material on anything underneath.

Evidently the makers of Cellactite have considered the possibility of this thought being in the minds of architects, and they therefore submitted their material to test by the Joint Fire Research Organisation at

Boreham Wood. It will be remembered that Cellactite consists of 'bitumen-enveloped corrugated steel sheet on which are bonded cellactite asbestos-asphalt felts'.

The report of these official tests shows that 'under the exacting conditions of the practical fire tests to which Cellactite was submitted there was no tendency for lateral spread of flame and no flaming drops at all were formed'.

The makers, naturally and rightly, confine their statement to Cellactite and presume that the absence of fire risk in their material is owing to the bitumen being firmly held by the asbestos ingredient, even at high temperatures, and they have been told that this agrees with practical experience when actual fires have occurred in buildings roofed with Cellactite.

Even if an architect feels more anxiously concerned with the stability and maintenance of a building than with the possible effects of a perhaps never-occurring fire, he may like to know that in certain forms and combinations advantage may be taken of the useful qualities of bitumen without much fear of the consequences of a fire.

Copies of the report may be obtained from Messrs. Cellactite and British Uralite Ltd., Whitehall Place, Gravesend, Kent.

Jointing Polythene Tubing. B.S. 1972: 1953, *Polythene tube for cold water services*, states that 'normal gauge tube should *not* be threaded but may be used with compression sleeve joints and spigot joints'. If heat is used it is not easy to make sure that the whole thickness of the tube is uniformly heated, and the B.S. directs that 'where jointing involves the expansion of polythene tube, heating must be done by immersing the ends of the tube for several minutes, to ensure uniform heating, in water which should be kept boiling'.

Imperial Chemical Industries have got over the difficulty by evolving a coupling fitting, made of polythene, from the walls of which two electrical leads protrude. The end of the tube to be joined is cut square and inserted till it butts closely against a stop inside the coupler. The two leads are then connected to a 2-volt accumulator or nickel-iron battery for 15 to 20 seconds. This results in the heating of special elements embodied in the fitting, which welds the contacting surfaces to form a strong permanent joint.

The fittings are for normal and heavy gauge I.C.I. Alkathene, or other polythene, tubes; nominal bore sizes ½ in., ¾ in., and 1 in., in the form of straight couplings, bends, tees and reducers. Adaptors are available for polythene to copper, and to male and female iron.

Baths v. Showers. In their advertising literature manufacturers usually give technical data and, occasionally, results of official tests, but seldom do they give information of a general nature that covers their particular product, and for this reason the leaflet describing Leonard mixing valves makes interesting reading because extracts are quoted from 'Housing of Special Groups', a report of the Scottish Housing Advisory Committee, who sent out a questionnaire on the subject of the bathroom.

The committee found that one of the greatest personal problems of older people has to do with taking a bath, due in part to lack of confidence in stepping down into a bath filled with water and to fear of slipping in the soapy water when leaving, and the committee came to the conclusion 'that showers are a more suitable type of washing facility than baths as far as older people are concerned'. The advantages are that showers use less hot water than baths and so need less fuel with a saving in costs to the older tenant; they are cleaned easily without the stooping required to wash out a bath, and they allow the architect to vary the placing of the equipment and the shape of the bathroom, thus making easier the internal layout of a small house.

In the course of the committee's survey their interviewers asked older people who wished to move if they would be willing to have a shower in their new house in place of a bath, and nearly 40 per cent said they would. The committee's report adds that 'It is essential that there should be thermostatic control so that it is impossible for an older person to be scalded by very hot water'. It is a little surprising that 40 per cent would accept a shower, because it might be thought that older persons—used to the usual bath in which they can 'soak' —may feel that a shower is not so fully cleansing, although they would no doubt agree that it is an excellent refresher on a hot day.

The extracts from the Scottish report are used by Messrs Walker, Crosweller and Company Ltd., of Whaddon Works, Cheltenham, to give point to the use of their thermostatic mixing valves, of which the Leonard Rada Valve is suited to single showers, the size of inlets and outlets being ½ in. This valve holds the temperature of the shower steady, a hidden stop preventing too high a temperature being inadvertently used. The required temperature is ensured by moving a regulating knob.

In the event of a failure of the cold water supply the hot supply is automatically cut off, so there is no risk of scalding. The valves can be installed either as single control to each shower or as group control of a number of fittings.

For other purposes larger valves are available and the manufacturers will give particulars and technical advice as to the correct valve for each particular requirement. They will also provide a maintenance service. The London office is at 4 Vernon Place, W.C.1.

F.P.R.L. The Forest Products Research Laboratory have published two documents; Special Report No. 9, *The Strength of Timber Struts*, and Special Report No. 10, *Laminated Beams from Two Species of Timber*. Report No. 9 gives details of the results of tests made on timber struts of the type used in light constructional work, a field in which relatively little research has been done. Tables give the failing stress, maximum crushing strength and modulus of elasticity of various timbers.

Report No. 10 deals with a theoretical analysis of the stresses in two-species laminated beams, that is, beams constructed by gluing relatively thin laminations of a dense strong species of wood to a core of a less dense weaker species. By placing the dense material in the positions where the greatest stresses are encountered, at the tension and compression surfaces in a beam, the strength characteristics can be considerably improved, and thus the possibility is offered of obtaining a lighter or a more economical member to resist a given load than can be obtained with single-species construction. Various equations and graphs are given.

Both reports are published by H.M.S.O., each price 1*s.* 6*d.* net.

The Forest Products Research Board have published their report for 1954, including the report of the Director, F.P.R.L. Among the many interesting investigations was that made on African cedar wood, of which there are available large quantities not suitable for cabinet work or for pencil manufacture. Chips from heartwood and sapwood were converted into hardboard which met the specification for standard hardboard, and the tests indicate that it should be feasible to extract the commercially valuable oil and make hardboard having good qualities of strength and durability under tropical conditions.

H.M.S. *Victory* has been fumigated with methyl bromide in an attempt to eradicate the death-watch beetle with which the timbers are infested; the result was encouraging, as only 938 emerging beetles were counted in 1954 whereas the figures for 1952 and 1953 were 7,713 and 5,200 respectively.

The report is published by H.M.S.O., price 3*s.* 6*d.* net.

Coloured Glass Cladding. Messrs. Pilkington Brothers Ltd. announce the introduction of a surface cladding type of glass ¼ in. thick, in which a vitreous enamel of various colours is fused on one side of the glass. It is available in rough cast quality, wired and unwired.

Flooring Timbers. With the object of helping architects, builders and private householders to choose flooring timbers having the desired properties and appearance, the Timber Development Association have provided a permanent exhibit of some 60 specimens. The exhibition may be seen during office hours at the T.D.A. offices, 21 College Hill, London, E.C.4, where the technical staff will be available for consultations.

British Standards Recently Published

B.S. 1143: 1955. **Salt-glazed Ware Pipes with Chemically Resistant Properties.** The scope of this Standard covers salt-glazed ware pipes and fittings with chemically resistant properties, of various types such as straight pipes, taper pipes, bends, junctions, and so on. Sizes and thicknesses are given, and methods of test. Price 4*s.* net.

Architects' Benevolent Society Annual General Meeting 1955

THE ANNUAL GENERAL MEETING of the Architects' Benevolent Society was held at the R.I.B.A. on Wednesday 4 May 1955. Mr. C. H. Aslin, C.B.E., President R.I.B.A., was re-elected President. Mr. H. S. Goodhart-Rendel, C.B.E., past President R.I.B.A., was re-elected Honorary Treasurer. Mr. Howard Lobb, C.B.E. [*F*], was re-elected Honorary Secretary. The Vice-Presidents and Council were elected for the year 1955–56. Mr. R. O. Foster [*F*], was elected Honorary Auditor in the place of the late Sir Harry Vanderpant. The President paid tribute to Sir Harry's keen interest in and generous support of the Society.

Mr. Aslin, in moving the adoption of the Annual Report, said:

'The general position of the Society appears to be stationary as regards income, though present-day conditions have made the needs greater, and there are many opportunities which the Society would like to take for improving the lot of those who apply for help.

'The Homes scheme is one very important way of helping the old people, so that they may have comfort and security in their last years. For this fund we are very much indebted to the energetic Ball Committee for the sums raised annually by the A.B.S. Ball.

'We are very grateful indeed to our local representatives and to the Allied Societies and other architectural organisations for all they have done to further the aims of the Society, and we hope they will continue their efforts to bring in new subscribers. We need the support of all members of the profession, whether at the beginning of a career or already established, and whether in private practice or in public offices. A very small subscription from every architect or assistant, which sum could be increased in proportion to the progress of his career, would make all the difference to the amount of good that the Society could do. May I ask all our contributors to make the Society and its activities known to their friends and colleagues, and to try to persuade them to support this very necessary and useful work.'

Mr. Howard Lobb, in presenting the Annual Report, said:

'It will be noted from the Report and Accounts that subscriptions and donations were about the same as in the previous year, but more applicants were helped during the year, although the total amount distributed was, regrettably, less than before because of the drop in income. We received more in legacies in 1954, and this money has been invested, in strict accordance with the bye-laws. A further investment was made for the Leonard Solomon Memorial Fund.

'A new pension was founded from Sir Banister Fletcher's legacy, and it is hoped to found another in due course from the investment of accumulated interest. This second pension will also, in accordance with Sir Banister Fletcher's will, be available for Fellows or Associates of the R.I.B.A. or their widows.

'Our expenses were less during 1954, chiefly due to economies in stationery and printing. One loss of income is the closing down of the Insurance Department. The A.B.S. Insurance Agency Ltd. has now been formed, however, in which the Society is a shareholder, and it is hoped that in the very near future some revenue from this new limited company may be received by the A.B.S.

'The Centenary Fund which was founded for the provision of the Society's own Homes has again been considerably increased by the proceeds of the A.B.S. Ball. We are very grateful indeed to the Chairman and Committee of the Ball for all they did, which resulted in a total profit of over £2,000. The date for the next Ball has been provisionally fixed for 8 December, and from the interest aroused in the last one I feel confident we shall have an equal success.

'We have again been offered a free stand at the Building Exhibition, through the kindness of the Managing Director, Mrs. Montgomery. We are most grateful for this, and hope it will bring in funds by the sale of Christmas cards, and also make the Society's work known.

'The Allied Societies' representatives have been very helpful during the year, and many have taken a lot of trouble in visiting applicants, and so helping the Case Committee to arrive at the proper decisions. They have also stirred up interest among their colleagues, and some have organised functions in aid of the A.B.S. which have brought in welcome extra funds. We are very grateful to them all, and hope that they will not weary of welldoing, because we badly need more money. Out of 18,000 architects on the Register there are only about 2,000 who contribute towards the A.B.S. If only everyone gave us five shillings we should be home and dry, and able to help the applicants who come before us very much more than we do.'

A small committee was formed to consider what action should be taken for increasing the number of subscribers to the Society.

Book Reviews

Simpson's History of Architectural Development. Volume ii: [2nd ed]. **Early Christian Byzantine and Romanesque Architecture,** by *Cecil Stewart*. 8½ in. xiv + 288 pp. + 24 pp. of illus. text plans. Longmans, Green. 1954. £1 10*s*.

It is about half a century since Simpson's *History of Architectural Development* first appeared, and it has certainly held its place as the standard text-book in its own province. But any text-book must, in its original form, become 'dated', and the publishers have appropriately decided 'that this valuable work should be brought up to date chronologically and factually' while preserving Simpson's individual approach to the subject. They might have added a third adverb had there been one to indicate recent progress in making books pleasant to look at and comfortable to handle.

The present volume, though the first to appear, is to be the second in a series of five. These are being 'edited' by different authorities, who are obviously undertaking an unusual task with its own special difficulties. If they all succeed as well as Cecil Stewart in this pious work, then the success of the whole venture is assured and the result will be of very great value.

To this volume of 271 pages the publishers have succeeded in allotting about 70 photographs, grouping several on one page without their being unpleasantly crowded; and few of them are hackneyed views. In addition, there is a vast number of excellently-drawn diagrams and these occur exactly where they are required in the text. Looking again at the original 'Simpson' one realises what distinction his black and white diagrams gave to his book. And how much fresh light he threw upon subjects previously slurred over! Where else, for instance, would one have found adequate account of the very distinctive local style of the churches of the Auvergne?

The large preponderance of church plans among the diagrams in the text may suggest to some people that the book is a dry one. It isn't, for the diagrams are balanced by the numerous illustrations. And for an unusual thrill, turn to the one on page 23 showing how Old St. Peter's was planned on the substructures of the Circus of Nero, with circular chapels thrown out on to the main axis of the Circus, to cover the actual sites where the saints there commemorated endured martyrdom.

A book to be bought and enjoyed.

A. L. N. RUSSELL [*F*]

Survival Through Design, by *Richard Neutra*. 8½ in. xi + 384 pp. New York & Lond.: Oxford U.P. 1954. £1 16*s*.

It is a platitude to say that human beings should be studied before designing to meet their needs, but Neutra states this so convincingly and augments his arguments with such a wealth of detailed observation as to

make this the theme of a very interesting book.

Man, he says, alone among animals, 'tinkers with his habitat', and nowadays this process is so involved that he creates 90 per cent of his physical surrounding and changes his environment faster than he can adapt himself to it biologically. Having reached a pessimistic view of the state of our designed world, Neutra's solution is to make a detailed study of men biologically in order to arrive at design standards that do not affect us detrimentally. We are composed of millions of nerve cells all interdependent, and it is the effect of our environment on these cells that interests him.

He gives examples of research that has been carried out, some on projects under his direction, and suggests further lines of investigation that might be useful. For instance, an experiment is quoted on the effect of poor lighting in a classroom, which was found to result in, among other things, a tendency to teeth decay among the pupils.

Though the Austro-American English, weighted with scientific jargon, makes parts of the book difficult to follow, there is a great deal of original and stimulating thought. The book however does not answer many of the questions it poses, and it is to be hoped that the suggested researches are carried out, so that appropriate action can be taken before it is too late.

It is surely a phenomenon for a book on architecture, especially written by an architect, to have not a single illustration.

M. V. YARDLEY [*A*]

Michael Rysbrack, Sculptor, by *M. I. Webb.* 9¾ in. 241 pp. incl. pls. and pp. of illus. + front. Country Life. 1954. £2 2*s.*

The architects of the first half of the 18th century, Gibbs, Kent, Campbell, Leoni, etc. are well known, and Lord Burlington's contribution to that period of 'precocious development of classicism in architecture' has been justly appreciated. The fact that he also patronised sculptors, and in particular Michael Rysbrack (*c.* 1694–1770), whose work in collaboration with these architects played an important part in the creation of Palladian interiors and gardens at Chiswick, Clandon, Houghton, Stourhead, Stowe and Woburn, has escaped general knowledge.

The study of post-medieval sculpture in England has been neglected since Mrs. K. A. Esdaile in her pioneering research showed that there was much of great charm in our parish churches and proved by her monograph on Louis François Roubiliac (*c.* 1705–1762), published in 1927, that there was at least one 18th-century sculptor in England who was worthy of aesthetic appreciation. Mrs. Webb, after a gap of 27 years, continues the story in her carefully documented account of the life and work of Roubiliac's rival. She has advanced on the method of her predecessor by setting Rysbrack within the artistic trends of European art. His origin in the Poussin-Duquesnoy classical stream of the 17th century, as opposed to the Rubens-Bernini baroque, is emphasised for, Mrs. Webb claims, it was Rysbrack's classicism which probably attracted Lord Burlington and certainly differentiated him from Roubiliac, whose antecedents were in the French rococo school. Roubiliac's fame in the 1740's as a result of the Argyll monument challenged Rysbrack's position, and Mrs. Webb admits that a few works done in the 1750's and early 1760's 'indicate that Rysbrack was to a certain extent influenced by the rococo fashion set by Roubiliac, though he was at the same time carrying out some of his most classical works'. It is, however, their difference of approach which is more fundamental and 'nowhere can the opposing styles of Rysbrack and Roubiliac be more easily compared than in the nave, south transept and Poets' Corner of Westminster Abbey'. Rysbrack's adaptability can be measured by the fact that in his late years he worked with the young Robert Adam, but the rise of neo-classicism had a more deadening effect on the sculptors of the next generation, and in the last part of the century none achieved the quality of either Rysbrack or Roubiliac.

Rysbrack's accomplishment was considerable. He not only carved portrait busts, free-standing statues and monuments, but also did work of a purely decorative nature, such as fireplaces, relief panels and garden sculpture. Of all these Mrs. Webb has compiled an invaluable list which sets out all the sculpture, existing or reliably documented, known to her at the time of going to press. Because of the paucity of literature this could only have been accomplished by personal inspection of the major part of Rysbrack's immense output as well as by research into private archives.

The book is packed with information and will undoubtedly be regarded as a standard work of reference on 18th-century sculpture in England for many years to come. For this purpose it is provided with an excellent index.

P. H.

True Remembrances. The memoirs of an architect, by *Philip Tilden.* 8½ in. 175 pp. + (32) pp. and pp. of illus. text illus. Country Life. 1954. £1 5*s.*

Philip Tilden is an unusual architect, an individualist who is quite out of sympathy with contemporary design. He even maintains that we should return to that national manner of building in which we excelled before the Renaissance. Britain, he says, is the home of the Gothic rose and not of the Greek acanthus. Nevertheless he has done some nice classical work. That octagonal library for Sir Philip Sassoon at Port Lympne, for instance, though overshadowed by the Spanish patio next to it, certainly looks very English in its Corinthian dress. Probably this bias to a more uncouth style grew from his restoration of medieval castles such as Allington and Saltwood in Kent—work done most faithfully and with charm as well; and it seems that these led to more creative work for very important people. For he built, in 1921, Lloyd George's house at Churt and soon after de-Victorianised Chartwell for Sir Winston Churchill. A number of other town and country houses followed, which he not only designed but decorated himself, painting their walls with tempera in a loose rendering of Tiepolo's tricks.

This book makes one think that its author will be remembered less as an architect than as a very remarkable draughtsman of buildings—possibly the best of his period. From the time 45 years ago at the A.A. Schools when he dashed off in perspective a subject for design over which the rest of us laboured in plan and elevation, he has shown a flair for architectural drawing in a most attractive ink line. This has undoubtedly proved very useful for explaining his views and for inflaming clients. So that, when Mr. Selfridge bought Hengistbury Head and proposed building a castle larger than Windsor on it, Tilden produced a series of magnificent drawings—plans, elevations and perspectives all in his ink line medium. From those reproduced in this volume the building looks fabulous; but one hopes that the drawings will belong, some time, to the nation.

On the other hand, those which display the tower—50 ft. sq. and about 400 high—which the same patron contemplated adding on top of his store in Oxford Street had better be lost. The most adroit draughtsmanship cannot conceal the vulgarity of the conception nor the resemblance of the different editions of it to bad great-uncles of the Imperial Institute tower. Tilden may have enjoyed inventing this colossus. There is in fact a curious note of exaggeration all through his memoirs. He overdramatises himself, the things he has done and the people he has known. The account becomes, towards the end, almost treacly with peers and their noble homes. One gasps for a page or two of lower middle-class housing. Still, it is pleasant to read about the Prime Minister falling into a well and what George Moore or John Sargent said or left unsaid. The book is perhaps as valuable a scrap-book of notable between-the-wars gossip as a contribution to the history of taste. Its author is a fluid and polished writer. He mingles skilfully his recollections of people and places with the catalogue of his own achievements in architecture.

A. S. G. BUTLER [*F*]

Display, edited by *George Nelson.* (Interiors library *series,* 3.) 12 in. 190 pp. incl. pls. [1953.] £5.

Comparatively few informative books exist on the subject of display and George Nelson's contribution is a welcome one. The book is divided into three parts, Systems, Display and Exhibitions. The first section, Systems, is devoted to new display structures and deals in great detail with almost every variety of prefabricated display structure in use at the present time. Photographs, sketches and meticulously-drawn fixing details show methods of construction in wood, metal and aluminium, illustrating clearly many brilliant solutions

of overcoming the difficult business of erection and demounting of display structures—a complicated problem that confronts the designer of prefabricated exhibits or travelling exhibitions. Here and now I must say that this comprehensive section alone warrants the addition of this book to the library of the professional reader.

Section two justifies the title and the examples of display illustrated embrace window display, exhibition exhibits, showrooms, interiors, shops, stores and the general arrangement of household goods, china and pottery.

The third and final section of this book covers most of the principal exhibitions from the Bauhaus 1938 to the Ninth Triennale 1951. A dozen or so pages are given over to the designer of the Bauhaus Exhibition at the Museum of Modern Art in 1938, Herbert Bayer, a fair tribute to a pioneer whose work and teachings have made such a marked influence upon the field of exhibition design and display. Excellent examples are shown of his early arrangements of flat planes, and his methods of relating simple rectangular elements to achieve a three-dimensional quality. Diagrams show how an early exhibition idea developed by Bayer was based on the 'field of vision'. Pictures and panels, related to the height and angle of a person's vision, were arranged above and below the eye level, so that more could be seen at greater ease. Photographs show the subsequent development of this idea to produce new ways of visual communication. Further illustrations show the ingenious inventions and devices of Bayer to focus attention on the display matter in unexpected ways. Direct in his approach to the problem, his ideas are rarely involved technically. Simple materials are used in a straightforward manner to present the subject matter as effectively as possible. These pages are of particular interest to the student and will be a welcome refresher for the practitioner in design.

The photographs that follow illustrate travelling and prefabricated exhibits, the 'Modern Art in Your Life' Exhibition, a project for a Museum, a Gallery for Children and the 'Good Design' Exhibitions held at the Museum of Modern Art, New York in 1950 to 1953 inclusive. The Transportation Exhibit at Milan 1948 is there too. No book embracing exhibition design dare omit this spirited work of Renzo Zavenella. The International Exposition of City Planning and Housing, Paris 1949, is followed by a fair section allocated to our own Festival of Britain 1951 and illustrates the major exhibits on the South Bank. I missed the lively photos of the gayer side of the Festival. Here the accent is on dignity. In strong contrast follow some dramatic shots of the virile and uninhibited work of Italian designers at the Ninth Triennale at Milan 1951.

Some 300 carefully selected photographs represent the most original work of more than 125 designers and architects of international standing. It is a pity that many of the photographs are familiar, but obviously this cannot be avoided in a volume intended as a pictorial reference book. The illustrations and plans, I feel, fall short of those found in *New Design in Exhibitions* by Richard P. Lohse and for general data and technical information the book does not compare with Misha Black's comprehensive work *Exhibition Design. Display* certainly merited a better jacket, which I earnestly consider will not appeal to British designers, many of whom, deterred by the layout and unfortunate choice of title typeface, may never turn the front cover to see the illustrations and writings of George Nelson that I enjoyed so much.

A. C. BRAVEN [A]

Principles of Modern Acoustics, by *George W. Swenson.* 9 in. vii + 222 pp. text diags. New York: Van Nostrand; Lond.: Macmillan. [1953.] £1 10*s.*

Although Professor Swenson does not claim to have written an exhaustive treatise, his account of acoustical research is more specialised than most architects will need. They will however find in Chapter VII useful notes on such problems as absorption coefficients, optimum reverberation times and, still more important, how they may be worked out in advance.

Building Construction, by *W. B. McKay.* Three volumes in one [var. eds., reprint]. ob. 8¾ in. × 11 in. (&) + (constituent vol. pp.). + pls. Longmans, Green. (Reprint of whole work 1955) (vols. 1953, 1944, 1944) £2 5*s.*

Many students will be glad to find this standard work in one volume with stiff covers at last, although it is only a reprint and not a new edition. A general index to all three volumes has been added, and minor corrections made. The separate volumes with limp covers will still be available.

Woodworm, its Biology and Extermination, by *Norman E. Hickin.* 8¾ in. 84 pp. text illus. priv. prin. (Bletchingley). 1954. 10*s.* 6*d.*

Architects may not share the author's interest in the biology of woodworm but here is some useful information on its extermination. It is rather hard to find, however, because of the book's confusing layout.

Structural Analysis. The solution of statically indeterminate structures, by *W. Fisher Cassie.* 2nd ed. 8½ in. xi + 269 pp. incl. pls. Longmans, Green, 1954. 18*s.*

Professor Cassie's well-arranged book is designed to demonstrate to advanced students the solution of mathematical problems on the theory of structures. The first edition proved popular in the R.I.B.A. Library and this second edition will be welcomed.

The City Fights Back. A nation-wide survey, *&c.*, by *Hal Burton.* (Urban Land Institute.) 8 in. 318 pp. + 16 pls. New York: Citadel Press; Lond.: Thames & Hudson. 1954. £1 10*s.*

The sponsors of this book employed a prominent popular journalist to carry out an examination of some of the problems affecting the healthy growth of American cities. Traffic congestion, parking, smog and the shortcomings of city government are among the subjects lightly and brightly touched upon. Nothing very new or profound emerges, and the tone is throughout a little bit smug. Some British readers will hardly share the author's confidence that everything will work out splendidly so long as urban development is left in the hands of private enterprise. This is no doubt very well for home consumption, but not for export.

J. C. P.

Ideal Home Book of Plans, by *Ideal Home* journal. [New ed.] 11¾ in. 1955. 5*s.*

Designs for 40 houses are shown here, 20 by the IDEAL HOME staff architect, 20 by others. There are brief particulars of each, plans of all floors, and perspectives or photographs. Although most of the houses, which vary greatly in size, are dressed in the well-worn, all too familiar clothes of the past 30 years the results are not always architecturally threadbare.

Correspondence

SYMPOSIUM ON HIGH FLATS

The Editor, R.I.B.A. Journal.

SIR,—I hesitate to prolong this correspondence: but Sir Lancelot really must not bolster up his protestations by the distortion of a vitally important point in my paper in a way calculated seriously to mislead those who have not read it in full. The statement he attributes to me is fundamentally different from what I in fact stated with regard to costs.

My paper was very specific and clear on this point and I cannot believe that others have experienced difficulty in fully understanding it. I will certainly not try the patience of your readers by unnecessary reiteration.

Until the final *comprehensive* costs of all development at Bracknell are available, and Sir Lancelot is in a position to give conclusive figures, I would suggest that a further study of my paper should, if he approaches the matter with an open mind, go a long way to dispel his present difficulties.

Yours faithfully,

R. A. JENSEN [*F*]

This correspondence is now closed. *Ed.*

BUILDING IN CITY CENTRES

SIR,—In his recent paper on 'Conditions of Building in City Centres', Professor Sir William Holford seems to imply that Le Corbusier's Cartesian solution is not only 'ideal' but impractical in the existing commercial and industrial conglomerations with historical associations which pass for cities in this country. One must be ready to believe this, first because of the authority of Professor Holford, and secondly because of the obvious immensity of the task in

physical terms. However, I cannot help wondering if a similar and perhaps equally desirable result could not be achieved if his principle of traffic segregation were accepted but in reverse, i.e. the ground level left as a battleground for the motorised leviathans, while the pedestrians are lifted above the dust, the noise, and the danger to first-floor level at least.

This might be achieved (administratively) by a variety of means, but one which might perhaps conform to Professor Holford's idea of the 'responsible patron' suggests itself. Certain streets, such as Regent Street and Oxford Street in London, have associations of shop-owners, which distinguished themselves at the time of the Coronation by the unity of their street decoration schemes if nothing else. They might be persuaded of the collective advantages accruing to themselves by being the first to erect street-long, glass-roofed, cantilevered shopping walks, with the necessary cross-over bridges and stairs and escalators at strategic points. The constructional problems are not enormous, as most of these buildings are steel or concrete framed. A far greater volume of shoppers could be accommodated than at present, in safe and pleasant circumstances, and more would be attracted by the novelty and pleasure of the situation. It would surely be more efficient to introduce people nearer the middle floor of any store, with the choice of moving up or down; or alternatively, the ground floor could be converted to a different use, such as storage or parking space, according to convenience and economy. The pedestrian pavement so set free on ground level could then be used for slow-moving traffic lanes for buses only, or as parking spaces, as seemed the best solution in each case.

Once a precedent had been established successfully, other 'patrons' would become aware that their private gain could also make them public benefactors: even public authorities might feel justified in taking action.

Yours truly,

G. M. HOBBS [*A*]

Sir William Holford has seen Mr. Hobbs' letter and writes: I did not wish to suggest that Le Corbusier's solution was impractical. I think it is absolutely right to aim at clearing as much of the ground level for pedestrian use as possible. It is certainly difficult in commercial centres in view of the competition for ground floor space; but I think the mechanical vehicle should be taken up or down rather than the pedestrian. I would consider your correspondent's proposal, though interesting, more impractical than Le Corbusier's.

MODULAR CO-ORDINATION RESEARCH

SIR,—Members of our Institute who had not the privilege of listening to Mr. W. A. Allen deliver his address upon the above subject to the Modular Society must have enjoyed reading the account of it in our April JOURNAL, as I did.

The ingeniousness of Table II, for which Mr. Allen gives credit to Mr. Ehrenkrantz, is such that we ought not to let it pass without some appreciative comment.

Table II is as follows:

Tripling			Fib.	Doubling			
—	9	3	1	2	4	8	—
—	18	6	2	4	8	16	—
—	27	9	3	6	12	24	—
—	—	15	5	10	20	—	—
—	—	—	8	16	32	—	—
—	—	—	—	—	—	—	—

What the table amounts to is the figures of the Platonic Lambda arranged horizontally for the first line instead of in the traditional form, thus:

1
3 2
9 4
27 8
16
32

Figures of the Fibonacci series are then added vertically, as Mr. Allen aptly described it, 'as a spine'. Each figure of the Fibonacci series is then developed in precisely the same way as the figures of the Platonic Lambda, namely, by multiples of 3 on one side and 2 on the other.

Of the numbers thus obtained Mr. Allen said 'Perhaps the character of the series will be shown up better if written down as a sequence, thus: 1 2 3 4 5 6 . 8 9 10 . 12 . . 15 16 . 18 . 20 . . . 27 . . . . 32 and (45).* It is interesting to compare this series with the figures in the Pythagorean–Platonic division of the musical scale quoted on pp. 91 and 92 of Prof. Wittkower's book *Architectural Principles* which are as follows: 6 . 8 9 . . 12 . . . 16 . 18 . . . . . 24 . . 27 and 32, etc. Of these figures the Professor says that whenever one meets ratios of this series it is safe to presume that this is not casual but the result of reflections which depend directly or indirectly on the Pythagorean–Platonic division of the musical scale.

To the latter series it is only necessary to set down the figures which occur in the ratios of our Western musical scale to obtain the earlier numbers in Mr. Allen's series in Table II, thus: 1 2 3 4 5 6 . 8 9 . . . . . 15 16 & 32 & 45.

A comparison of the above three series gives weight to Mr. Allen's fourth condition which a system must meet to be successful and which he expresses in the following words: 'It must be possible to associate numbers in the sequence to give a wide range of proportions. An analogy might be said to be a well-tempered scale in music, modular in character, capable of wide musical expression but itself aesthetically almost neutral.'

The only two figures which occur in Mr. Allen's series which do not appear in the other two series are 10 and 20; they are the unit and double-unit multiplied by ten and generated from 5 in the Fibonacci series.

These facts, I think, make it clear that Table II is very sound and an ingenious basis from which to work with hope of future results.

Yours faithfully,

A. L. ROBERTS [*F*]

* (45) can rightly be added.

OLD BUILDINGS MAINTENANCE PROBLEM

SIR,—In the JOURNAL for April 1952 you published a letter from me, asking whether any member could suggest a means of preventing deterioration of underburnt bricks in an old building. I had already consulted the Building Research Station and the Ancient Monuments Board of the Ministry of Works.

I received a number of very helpful suggestions and most of my correspondents agreed with the view which I expressed in the letter, that the application of a silicate solution would result in a hardening of the surface of the bricks and might leave them in a worse condition than previously.

However, one member who had great experience of the maintenance of old buildings went to the trouble of examining samples of the brick and then recommending the use of a proprietary solution which he was confident would do what was necessary. Still being filled with doubt, I arranged for this material to be applied on a small section of the brickwork. The work was done in July 1952 and since then it certainly seems to have improved the resistance of the bricks which were treated. It had the effect of putting a glaze on the brickwork, but this is now beginning to diminish slightly. I did, however, receive an explanation from the makers as to the probable reasons.

The building has now been sold and I am not likely to have an opportunity of keeping it under observation in the future, but if any member who read my original letter should be interested I can let him know the name of the material.

Yours faithfully,

JOHN E. STUPPLES [*A*]

HENRY MARTINEAU FLETCHER MEMORIAL TRUST FUND

SIR,—A group of friends and members of the family of Henry Martineau Fletcher are proposing to set up a trust fund as a memorial to him. It is their intention to place the administration of this fund in the hands of the R.I.B.A. Library Committee, who will use the interest to purchase books of a type in which, they consider, H. M. Fletcher would have been particularly interested. These books will be identified by a special book plate.

There may well be many who would like to be associated with this practical tribute to one who had the purposes of architecture and the architectural profession so much at heart. Those who would like to subscribe to the fund are asked to send their contributions to: S. Rowland Pierce, c/o The Librarian, R.I.B.A., 66 Portland Place, London, W.1. Cheques should be crossed H. M. Fletcher Memorial Fund.

Yours faithfully,

GRAHAME TUBBS [*F*],
Chairman of the Library Committee

Notes and Notices

NOTICES

Minutes IX. Session 1954–1955. At the Ninth General Meeting of the Session 1954–1955, held on Tuesday 14 June 1955 at 6 p.m., Mr. C. H. Aslin, C.B.E., President, in the chair.

The meeting was attended by about 105 members and guests.

The Minutes of the Eighth General Meeting held on Tuesday 17 May 1955 were taken as read, confirmed and signed as correct.

The following members attending for the first time since their election were formally admitted by the President: *As Associates:* H. H. Davies, A. R. F. Delia, S. H. Green, K. P. J. Looker, A. W. J. Reeves, C. S. Rowberry, R. D. Stokes, P. M. Troy, P. A. G. Young, E. P. Hill, L. C. Matty.

The Secretary having read the Report of the Scrutineers on the result of the Annual Election for the Council, the President declared that the members of the Council and the Honorary Auditors for the Session 1955–56 were duly elected in accordance therewith. On the motion of the President, a vote of thanks was passed by acclamation to the Scrutineers for their labours, and was briefly responded to by Mr. E. G. Allen [*F*], Chairman of the Scrutineers.

Professor Charles Madge having read a Paper on 'Sociology and Architecture', a discussion ensued and on the motion of Professor Sir Patrick Abercrombie, M.A., D.Lit., F.S.A., M.T.P.I. [*F*], seconded by Mr. Michael Young, of the Institute of Community Studies, a vote of thanks was passed to Professor Madge by acclamation and was briefly responded to.

The proceedings closed at 7.46 p.m.

Building Surveying Examination. The R.I.B.A. Examination qualifying for candidature as Building Surveyor under Local Authorities will be held at the R.I.B.A. on 12, 13 and 14 October 1955. Applications for admission to the examination must be made not later than 12 August on the prescribed form to be obtained from the Secretary R.I.B.A.

Disciplinary Action. The membership of Mr. William Mathias Carter [*A*], of Lloyds Bank Chambers, Richmond, Surrey, has, by decree of the Council made pursuant to Bye-laws, been suspended for a period of four years nine months from 14 June 1955; and accordingly he ceases during that period to be a member of the Royal Institute.

The membership of Mr. Harold Alexander [*L*], of 174 Sloane Street, London, S.W.1, has, by decree of the Council made pursuant to the Bye-laws, been suspended for a period of nine months from 14 June 1955; and accordingly he ceases during that period to be a member of the Royal Institute.

Mr. Maurice Alexander [*L*], of 3 St. Alban's Avenue, Bedford Park, Acton, London, W.4, was reprimanded by a decree of the Council, dated 14 June 1955, made pursuant to the Bye-laws.

Associates and the Fellowship. Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the next available election they should send the necessary nomination forms to the Secretary, R.I.B.A., as soon as possible.

Licentiates and the Fellowship. By a resolution of the Council passed on 4 April 1938 all candidates whose work is approved are required to sit for the Examination, which is the design portion of the Special Final Examination, and no candidates will be exempted from the Examination.

Note.—The above resolution does not affect Licentiates of over 60 years of age applying under Section IV, Clause 4 (*c*) (ii) of the Supplemental Charter of 1925.

CURRENT R.I.B.A. PUBLICATIONS

The following is a list of the main R.I.B.A. publications with their prices.

Agreements, Forms of

Form of Agreement for General Use between a Private Building Owner and an Architect or a Firm of Architects.

Form of Agreement for General Use between a Building Owner (being a Statutory Authority) and an Architect or a Firm of Architects.

Form of Agreement between a Local Authority and a Firm of Architects for Housing Work.

Form of Agreement between a Local Authority and a Firm of Architects for Multi-Storey Flats.

Form of Agreement between the Promoters and a Firm of Architects appointed as the Result of a Competition.

Price 6*d.* per form (inclusive of purchase tax). Postage 3*d.*

Architect and His Work, The

Price 6*d.* Postage 3*d.*

Before You Build. Free.

Certificates, Architects', Form Prepared by the Practice Committee

Copyright Book of 100 Certificates.
Price 17*s.* (inclusive of purchase tax). Postage 1*s.* 3*d.*

Conditions of Engagement and Scale of Professional Charges

Price 6*d.* Postage 3*d.*

Contract, Form of Agreement and Schedule of Conditions

For use with quantities: 1939 revised 1952. Copyright.

For use without quantities: 1939 revised 1952. Copyright.

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Adapted for the use of Local Authorities, for use with quantities: 1939 revised 1952. Copyright.

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Price 2*s.* 4½*d.* per form (inclusive of purchase tax). Postage 3*d.*

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Cost Plus Percentage Form of Prime Cost Contract for use in the repair of war-damaged property: 1946 revised 1955. Copyright.

Price 2*s.* 2*d.* (inclusive of purchase tax). Postage 3*d.*

Examination, Intermediate, Questions Set At

Price 1*s.* per examination. Postage 3*d.*

Examination, Professional Practice, Questions Set At

Price 6*d.* Postage 3*d.*

Examinations, Final and Special Final, Questions Set At

Price 1*s.* per examination. Postage 3*d.*

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Membership of the R.I.B.A.

Particulars of the Qualifications for Associateship.

Price 2*s.* 6*d.* Postage 3*d.*

Party Wall Notice Forms, for Use Under the London Building Act

Form A—Party Structure.

Form B—Party Fence Walls.

Form C—Intention to Build within Ten Feet and at a lower level than the bottom of the foundations of adjoining Owner's Building.

Form D—Intention to build within Twenty Feet of the adjoining Owner's Independent Building and to a depth as defined in Section 50 (1)(b).

Form E—Party Walls and Party Fence Walls on line of Junction of adjoining lands.

Form F—Walls or Fence Walls on Building Owner's land with footings and foundations projecting into adjoining Owner's land.

Form G—Selection of Third Surveyor.

Price 7*d.* per form (inclusive of purchase tax). Postage 3*d.*

Prizes and Studentships

Price 2*s.* 6*d.* Postage 3*d.*

COMPETITIONS

New Legislative Council Building, Uganda, East Africa. The Uganda Government invites architects registered in the United Kingdom or East Africa or corporate members of the R.I.B.A. in East Africa to submit in competition designs for a new Legislative Council Building, comprising a Council Chamber and ancillary offices, to be erected in Kampala.

Assessor: Mr. H. Thornley Dyer, A.M.T.P.I. [*F*].

Premiums: £750, £500 and £250.

Closing date for sending applications for conditions: 20 August 1955.

Last day for submitting designs: 21 January 1956.

Conditions may be obtained on application to the Clerk of Legislative Council, P.O. Box 2278, Kampala, Uganda, East Africa.

Deposit: £3 3*s.* 0*d.*, by cheque or Bankers Draft, made payable to the Uganda Administration.

Manhattan Redevelopment: International Competition. The publishers of *U.S.A. Tomorrow* invite architects, city planners, engineers and all others identified with these or allied professions to submit schemes for the redevelopment of the mid-town area of Manhattan. *There is no undertaking that any award-winning entry will be used.*

Assessors: Mr. Charles Abrams, Professor Percival Goodman, Mr. Jose Luis Sert, Mr. William W. Wurster, Mr. Maurice E. H. Rotival.

Premiums: $5,000, $2,500, $1,500, $1,000.
Last day for submitting schemes: 1 June 1956.
Conditions may be obtained on application to: 'U.S.A. Tomorrow,' Manhattan Redevelopment Competition, 210 Fifth Avenue, New York 10, N.Y., U.S.A.

New Offices, Enniskillen. The Fermanagh County Council invite British architects to submit designs for new offices to be erected in Enniskillen, Northern Ireland, on a site adjoining the Courthouse.
Assessor: Mr. R. S. Wilshere, M.C., F.R.I.C.S. [*F*].
Premiums: £500, £200.
Last day for submitting designs: 4 p.m. 20 December 1955.
Last day for questions: 4 p.m. 5 September 1955.
Conditions may be obtained on application to the Secretary, Fermanagh County Council, Enniskillen, Co. Fermanagh.
Deposit: £2 2*s*. 0*d*.

International Competition for a Monument in honour of Generalissimo Dr. Rafael Leonidas Trujillo Molina. Notice has been received from the Secretary General of the International Union of Architects of an architectural competition being promoted in the Republic of Dominica for the design of a monument commemorating Dr. Rafael Leonidas Trujillo Molina.

The conditions for this competition are at present not such as to conform to the Regulations for International Competitions in Architecture and Town Planning approved by the International Union, *and members and Students R.I.B.A. are accordingly warned not to take part in this competition.*

If, as a result of further negotiation, the conditions are amended to satisfy the requirements of the International Union, a further notice will be published.

BOARD OF ARCHITECTURAL EDUCATION

R.I.B.A. Intermediate Examination. May 1955. The R.I.B.A. Intermediate Examination was held in London, Plymouth, Manchester, Leeds, Newcastle, Edinburgh and Belfast from 6 to 12 May 1955.

Of the 541 candidates examined, 157 passed and 384 were relegated.

The successful candidates are as follows:—

Altmann: F. R.
Andrews: Peter
Arkwright: A. M.
Armitage: Leo
Ashworth: G. W.
Barber: R. A.
Barker: D. J.
Barker: J. S.
Blake: A. J.
Bonner: M. F.
Bonney: J. H.
Bonny: J. F.
Bradshaw: Raymond
Brooks: B. M.
Brooks: J. B.
Buckhurst: P. S.
Carter: O. F.
Chamberlayne: Derek
Charlton: Albert
Chitty: J. G.
Church: D. G. A.
Collen: H. S.
Collier: Keith
*Comber: R. J.
Cooper: F. C. J.
Cooper: G. C.
Cooper: J. H.
Creedon: R. C.
Crisp: K. J. H.
Crowther: R. A. N.
Croydon: D. A.
Crummett: P. A.
Daniels: J. E. J.
Dean: Ronald
De Burgh-Thomas: H. M.
Denning: N. E.
Devese: Graham
Dilley: K. J.
Dixon: Gerald
Douglas: C. S.
Dowling: T. J.
Drinkwater: J. P.
Dulstone: C. E.
Eaton: H. B.
English: James
Erridge: J. D.
Fetherstone: J. M.
Freeman: Harvey
Gardiner: Martin
Gay: W. A. J.
Geden: R. A.
Gibb: R. H.
Gibbs: F. J.
Giles: G. B.
Gladwell: P. W.
Goldsack: C. E. J.
Gospel: J. F.
Granston: Dennis
Griffiths: J. A.
Harris: Brian
Harris: E. G.
Hawkes: S. A.
Hayward: Brian
Herron: R. J.
Hill: Peter
Holden: W. D.
Hollingsworth: K. L.
Horsman: M. A.
Hudson: A. J.
Humphries: Maurice
Iwanicki: R. Z.
Jarrett: W. E.
Jeavons: G. R.
Jones: G. A.
Jones: R. A.
Kaberry: A. R.
*Keightley: J. A. C.
King: D. E.
Ladbrooke: W. M.
Lamb: John
Lambert: Eric
Lang: Simon
Langley: J. V.
Lear: Graham
Lidbetter: W. J.
Litherland: G. R.
Livsey: William
Lloyd: W. J.
Longfield: M. B. K.
Lovatt: John
Lowe: P. F.
MacGregor: I. P.
McGuire: J. P.
McSheffrey: G. R.
Maggs: J. K.
Maidment: R. J.
Mair: A. A. P.
Martin: C. M. (Miss)
Martin: J. W.
Mather: Glyn
Mather: R. W.
Mehandru: Lalit
Mercer: A. F.
Michell: G. C.
Middleton: J. S.
Milner: C. R.
Mitchell: S. J.
Nicholls: A. D.
Nolan: Gordon
O'Farrell: J. A.
Page: P. E.
Parker: F. T.
Parsons: I. R.
Parsons: O. H.
Perry: M. A.
Peverley: J. R.
Pollard: Brian
Powys: Oliver
Pratt: C. J.
Price: S. O. V.
Raine: Alan
Richards: A. D.
Rowlands: P. T.
Rumun: Jacek
Russ: M. J.
Rye: N. F. G.
Sanders: A. J.
Sexton: J. R.
Sherrington: B. L.
Skinn: D. M.
Smith: Brian
Smith: John C.
Smith: P. G.
Smith: Raymond
Spence: R. M. M.
Stapleton: K. W.
Stott: J. R.
Stuckey: R. B.
Sykes: B. M.
Talbot: M. J.
Taylor: R. H. F.
Thomson: G. M.
Thurston: B. C.
Toft: Eric
Ward: Ian
Warner: Brian
Wells: Roy
Wheatley: M. J.
Wilkins: John
Willis: J. G.
Wilson: J. K.
Winwood: Anthony
Wood: Alexander
Wood: I. J.
Woodward: J. F.
Wright: R. K.
Zerafa: B. E.

* Subject to approval of History Thesis or Theses.

Distinction in Thesis. Mr. Bernard W. Blanchard, who passed the R.I.B.A. Final Examination in December 1949, has been awarded a Mark of Distinction for his thesis.

ALLIED SOCIETIES

Changes of Officers and Addresses

Berks, Bucks and Oxon Architectural Association. Hon. Secretary, A. J. Miller [*A*].

Berkshire Society of Architects. Chairman, N. C. Hughes [*A*].

Blackpool and Fylde Architectural Society. President, A. S. Hamilton [*A*]. The Secretary, Mr. C. S. Jordan, has changed his address to 32 Talbot Road, Blackpool. (Telephone Blackpool, South Shore, 43750).

Devon and Cornwall Society of Architects: Truro Branch. Chairman, J. H. Crowther [*F*]. The Hon. Secretary, Mr. Leslie Buxton [*A*], has changed his address to 23 River Street, Truro, Cornwall (Truro 2024).

Essex, Cambridge and Hertfordshire Society of Architects: Hertfordshire Chapter. Joint Hon. Secretary (in succession to G. A. J. Mathers [*A*]), W. W. Turney [*L*].

Hampshire and Isle of Wight Architectural Association: Isle of Wight Chapter. Hon. Secretary, Eric Sweetman [*A*].

Manchester Society of Architects. President, L. C. Howitt [*F*].

Norfolk and Norwich Association of Architects. President, H. C. Boardman [*A*].

Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects: Huntingdonshire Branch. Chairman, J. A. Wardley [*A*].

Oxfordshire Society of Architects. Hon. Secretary, James A. D. Cox [*A*].

South Eastern Society of Architects: Brighton District Chapter. Hon. Secretary, J. P. R. Black [*A*].

South Wales Institute of Architects. President, W. Stephen Thomas [*A*]. *Western (Swansea) Branch:* Chairman, C. G. Vaughan [*L*].

Wessex Federal Society of Architects. President, J. Nelson Meredith [*F*].

West Yorkshire Society of Architects: Huddersfield Branch. Joint Hon. Secretary (in succession to Norman S. Lunn [*F*]), Gerald M. Baxter [*A*].

York and East Yorkshire Architectural Society. President, H. D. Priestman [*A*].

Institute of South African Architects. President-in-Chief, W. A. Macdonald [*F*].

Orange Free State Provincial Institute. President, E. M. Pincus, 319 Permanent Building, Maitland Street, Bloemfontein, O.F.S., S. Africa. Hon. Secretary, R. Roberts, 305 Sasbank Building, Maitland Street, Bloemfontein.

Royal Victorian Institute of Architects. President, Harry S. Winbush [*F*]. Hon. Secretary, Lloyd E. A. Orton [*A*].

South Eastern Society of Architects. Annual Luncheon. The annual luncheon of the South Eastern Society of Architects was held at the Connaught Rooms on 4 June. This was the first time the function had been in London.

The company was received by the President of the Society Mr. Graham Crump [*F*] and Mrs. Crump and by Mr. Rowland Pierce, Vice President R.I.B.A., and Mrs. Pierce.

During the course of the proceedings the President made the award to Sir Edward Maufe, R.A. [*F*], who was accompanied by Lady Maufe, of the R.I.B.A. Bronze Medal and certificate for the most outstanding work of architecture in the south-eastern area in the period since the war ending December 1953. The building nominated was the Royal Air Force Memorial at Runnymede and in his reply to the President Sir Edward explained some of the reasons which had prompted his decisions in formulating the design.

The toast of 'Architecture' was proposed by Sir Alfred Bossom, Bart., M.P. [*F*], who made an able plea for efforts to secure the survival of the private architect in an age which he said threatened to see architecture become in measurable time a branch of the Civil Service. Mr. Rowland Pierce in his reply challenged some of Sir Alfred's statements but went on to reaffirm the Institute's policy of unity in the profession. He made a good case for his own belief that the one thing in architecture which really matters is not who does it but whether what is done achieves the dignity of an art.

The President proposed the toast of the guests, included among whom were Mr. J. H. Forshaw, C.B., M.C., M.T.P.I. [*F*], Chief

Architect to the Ministry of Housing and Local Government, and Mr. A. Chapman, Vice President L.M.B.A. He coupled with it the name of The Archdeacon of Croydon, The Ven. C. F. Tonks, who brought a delightful occasion to its close with a felicitous speech. He reminded architects of the step taken by the Church Assembly in adopting as a principle the regular inspection of church fabrics by properly qualified architects and the establishment of the Archbishop's fund for church maintenance.

GENERAL NOTES

British Institution Fund Scholarships. The Trustees of the British Institution Fund offer four scholarships, in architecture, painting, sculpture and engraving respectively. Awards will take the form of *either* £100 a year (tenable in Great Britain) for two years, *or* a travelling scholarship, *or* a prize of up to £100, according to the circumstances of the candidate. In certain circumstances a scholarship, other than a travelling scholarship, may be extended for a third year.

The scholarships are open to all art students of not more than 25 years on 1 November 1955 who have been engaged in either a whole- or part-time course at a recognised school of art in Great Britain or Northern Ireland and who are attending such a school. In cases of exceptional merit the age limit may be waived. Candidates who have served with the armed forces or in some other form of National Service may deduct the period of such service from their age.

The entry for the architecture award consists of: (1) a measured drawing of an existing 17th- or 18th-century building; (2) a freehand drawing of a classic or renaissance piece of ornament or sculpture; (3) an original design for a village post office. Completed work must be delivered to the Royal Academy on 4 October 1955.

Copies of the Regulations may be obtained from the Secretary to the Trustees, Royal Academy of Arts, Piccadilly, London, W.1. *A stamped addressed envelope should be enclosed.*

British Memorial Fund Fellowship in Architecture. A Fellowship worth £1,000 (Australian) is offered to a young architect by the British Memorial Fund, established in Victoria, Australia, by public subscription. The Fellowship is a gesture of 'loyalty, gratitude and affection' to the British people in recognition of their 'role in saving civilisation in the Second World War'.

It provides for ten months' study in Victoria for the selected candidate and covers travelling and living expenses during the period. Accommodation will be arranged by the Fund. Wives and children are welcome but no extra expenses can be paid to cover them. The upper age limit for both men and women is 36 years, and applicants must be of British stock of at least ten years' residence in the United Kingdom.

The Fellowship is to be granted to a young architect who has experience in carrying out work, or as an assistant, in projects of some calibre. He or she must be a graduate of a school of architects recognised by the R.I.B.A.

Full details can be obtained from The Hon. Sir John Lienhop, Agent-General for Victoria and Chairman of the British Memorial Fund, London Selection Committee, Victoria House, Melbourne Place, Strand, London, W.C.2. The closing date for the receipt of applications is 5 August 1955.

Truscon Travelling Scholarship. The Truscon Travelling Scholarship for the study of reinforced concrete work offered by The Trussed Concrete Steel Company Limited, details of which were given in the March JOURNAL, has been awarded to Mr. A. Redhouse [*A*].

Mr. Redhouse will be accompanied by Mr. F. Bailey of the Company's staff, to whom a similar scholarship has been awarded, on a three weeks' tour of the Continent. He is a partner in the firm of Fry, Drew, Drake and Lasdun and on the teaching staff of the Polytechnic School of Architecture, Regent Street.

The York Courses. The summer vacation courses of the York Institute of Architectural Study are: (1) *Summer School for Architectural Students*, 30 July to 13 August; this is the usual course for measured drawing, historical studies and lectures by well-known architects and historians. (2) *Summer School on 'A History of English Architecture'*, 13 to 20 August; this is for laymen and includes lectures, films and visits. (3) *Course on Public Park and Garden Design*, 7 to 14 September; this is for architects, town-planners, landscape architects and park superintendents. (4) *Specialised Course on the Care of Churches*, 14–21 September; this is a repeat of a course which has been held annually since 1953 and which has proved most popular. Full particulars can be obtained from The Secretary, The York Institute of Architectural Study, St. Anthony's Hall, York (Tel. 54711). All the courses are under the supervision of the Director, Dr. W. A. Singleton [*F*].

R.I.B.A. Cricket Club. *R.I.B.A. v. Vitruvians. 18 May 1955, played at Elstree.*

Results

R.I.B.A.

Marlow, b. Mudie	3
Batty, b. Dowson	9
Smyth, st. Leslie, b. Hart	26
Bishop, c. and b. Dowson	29
Davison, lbw. b. Hart	5
Holmes, st. Leslie, b. Hart	0
Linfield, c. and b. Richards	6
Atkinson, b. Dowson	9
Fairbairn, st. Leslie, b. Mudie	10
Taylor, c. Richards, b. Dowson	0
Norton, not out	2
Extras	9
	108

Dowson 4 for 34; Hart 3 for 16; Mudie 2 for 21.

Vitruvians

Mudie, b. Smyth	27
Boswell, lbw. b. Smyth	31
Boyd, c. Batty, b. Smyth	6
Dowson, c. Marlow, b. Batty	10
Hart, st. Holmes, b. Batty	4
Matthews, c. and b. Smyth	2
Watts, b. Smyth	0
Faldo, not out	2
Binfield, not out	0
Extras	2
Total (7 wkts.)	84

Smyth 5 for 16; Batty 2 for 36.

Result: a draw.

R.I.B.A. v. L.M.B.A. 1 June.

R.I.B.A.

J. Kennedy-Hawkes, b. Walker	3
A. Marlow, b. Walker	2
D. L. Robinson, b. Marshall Andrew	67
J. G. Batty, b. Marshall Andrew	64
D. le M. Brock, lbw. b. Stokes	2
C. A. R. Norton, b. Marshall Andrew	43
B. Nichols not out	31
R. R. Fairbairn, b. Marshall Andrew	10
W. W. Atkinson, b. Garrett	7
D. S. Taylor, b. Marshall Andrew	3
H. E. S. Francis, did not bat	
Extras	4
Total (9 wkts., dec.)	236

Walker 2 for 58; Garrett 1 for 75; Wright 0 for 25; Marshall Andrew 5 for 47; Thomas 0 for 11; Burns 0 for 15; Stokes 1 for 1.

L.M.B.A.

A. F. Wallis, c. Francis, b. Nicholls	3
D. F. Wallis, b. Robinson	19
M. Brock, b. Batty	13
A. J. Burns, not out	58
S. Wright, not out	48
E. J. Woods, J. N. Walker, J. W. Stokes, J. Marshall Andrew, J. Thomas, B. J. Garrett — did not bat	
Extras	6
Total (for 3 wkts.)	147

Nicholls 1 for 31; Norton 0 for 30; Francis 0 for 19; Robinson 1 for 19; Batty 1 for 42.

R.I.B.A. v. A.A.C.C. 15 June 1955

A.A.C.C.

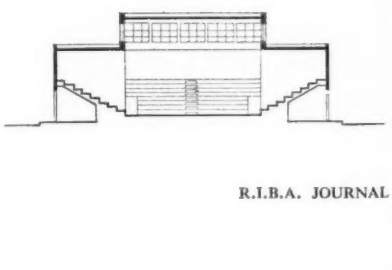
Winkley, lbw. b. Norton	10
Case, c. Batty, b. Norton	64
Nicholls, lbw. b. Francis	14
Fraser, b. Mudie	2
Dalton, b. Mudie	14
Knott, b. Batty	14
Gibson, c. Holmes, b. Batty	19
Hunter, b Norton	1
Tucker, b. Norton	6
Aquitar, c. Atkinson, b. Batty	4
Talbot, not out	0
Extras	15
Total	163

Mudie 2 for 42; Francis 1 for 31; Batty 3 for 41; Norton 4 for 35

R.I.B.A.

P. R. Davison, c. Fraser, b. Case	0
R. D. Mudie, b. Nicholls	19
L. G. W. Bishop, c. Knott, b. Gibson	0
J. G. Batty, b. Gibson	1
R. H. Holmes, b. Case	11
G. R. Linfield, c. Knott, b. Gibson	7
C. A. R. Norton, b. Case	0
D. le M. Brock, not out	23
W. W. Atkinson, c. Knott, b. Gibson	0
H. E. S. Francis, lbw. b. Gibson	14
D. E. S. Taylor, c. Winkley, b. Case	2
Extras	0
Total	77

Case 4 for 24; Gibson 5 for 18; Nicholls 1 for 18; Dalton 0 for 17.



Notes from the Minutes of the Council

MEETING HELD 14 JUNE 1955

1. Appointments. (*a*) *National Smoke Abatement Society: R.I.B.A. Representatives:* Howard V. Lobb [*F*] and George Fairweather [*F*]. (*Note:* Mr. Lobb is also the R.I.B.A. Representative on the Executive Council.) (*b*) *National Inspection Council for Electrical Installation Contracting: R.I.B.A. Representative:* Thomas Mitchell [*A*].

2. Birthday Honours. The congratulations of the Council were conveyed to the following members on whom Her Majesty The Queen had conferred awards: *Companion of Honour:* Henry Moore [*Hon. A*]. *C.B.E.:* Professor K. A. C. Creswell [*Hon. A*], C. G. Mant [*F*], Lister P. Rees [*A*]. *O.B.E.:* Lieut.-Colonel P. J. Barbary, G.M., T.D. [*A*]. *M.B.E.:* A. M. Petrie [*L*].

3. R.I.B.A. London Architecture Bronze Medal. It was reported that the Jury entrusted with making the award for the year ended 31 December 1954 had made their award in favour of the Ackroydon Estate, Wandsworth, S.W.19, designed by the Architect to the London County Council.

4. R.I.B.A. Architecture Bronze Medal: The Essex, Cambridge and Hertfordshire Society of Architects. Formal approval was given to the award made by the Jury for the three-year period ending 31 December 1954 in favour of the Harrowfield Boys' Secondary School, Harold Hill, Essex, designed by Richard Sheppard and Partners (Richard Sheppard [*F*], Jean Shufflebotham [*A*] and Geoffrey Robson [*A*]).

5. British Architects' Conference 1955. A hearty vote of thanks was passed unanimously in favour of the President and Council of the West Yorkshire Society of Architects and all those who had assisted in the successful Conference held at Harrogate.

6. Henry M. Fletcher Memorial Fund. The Council concurred in the proposal of a group of friends and members of the family of the late Henry M. Fletcher [*F*] to set up a trust fund as a memorial to him. The fund is to be administered by the R.I.B.A. Library Committee as trustees, the income to be used for the purchase of books, each of which will bear a special memorial plate.

7. Joint Meeting with Illuminating Engineering Society. The Council approved a recommendation from the Science Committee that a joint meeting should be held with the Illuminating Engineering Society during the coming session, at which a paper treating on the relationship of the architect and the illuminating engineer would be given by Mr. Derek Phillips [*A*].

8. National Inspection Council for Electrical Installation Contracting. On the recommendation of the Science Committee, the Council gave approval to the Royal Institute becoming a subscribing member to the National Inspection Council for Electrical Installation Contracting. The R.I.B.A. will be represented on the Council and on the National Inspection Board.

9. Completion of Premises Fund. The Council received with appreciation a donation of two guineas to the Completion of Premises Fund from the Metropolitan Association of Chief Housing Officers and Architects.

10. Bequest by the late Sir Harry Vanderpant [*Hon. A*]. The Secretary reported that under the will of the late Sir Harry Vanderpant [*Hon. A*], £10,000 had been bequeathed to the R.I.B.A. under the following conditions: *To be applicable for the purpose of founding (or augmenting any existing fund given by him for the like purpose) travelling or other scholarships, to be designated as the Henry L. Florence Scholarships.*

It was left to the Officers of the Board of Architectural Education to make recommendations on the application of this bequest.

11. Membership. The following members were elected: as Honorary Associate 1; as Fellows 14; as Associates 217; as Licentiates 4.

12. Students. 99 Probationers were elected as Students.

13. Resignations. The following resignations were accepted with regret: S. Phillips Dales [*F*], Hugh Stammer Tiffin [*Ret. F*], Geoffrey Follows [*A*].

14. Applications for Transfer to Retired Members' Class under Bye-law 15. The following applications were approved: as Retired Fellows: James Stoneman Bramwell, Kenneth Stephen Broad; as Retired Associate: Cyril Procter Garrard; as Retired Licentiate: James Ernest Lund.

15. Obituary. The Secretary reported with regret the death of the following members: John Sigismund Wilson [*Hon. A*], John Alexander Ogg Allan [*F*], Paul Coleridge, M.C. [*F*], John Edward Dixon-Spain, O.B.E. [*F*], Harry Nurse, M.C. [*F*], James Ernest Harris Paisley [*F*], Charles Benjamin Smith [*F*], William Barnet Wyllie [*F*], James Herbert Belfrage [*A*], Alexander James Cruickshank [*A*], Joseph Garnet Hands [*A*], Joseph Alexander Henderson [*A*], Francis William Marshall [*A*], James Wood, M.C. [*A*], Douglas George Boucher [*L*], Norman Fisher [*L*], Arthur Henry Russell, B.E.M. [*L*], John Walter Wyles [*L*], John Simpson Bowie [*Retd. L*], George Povey [*Retd. L*], Frank Lawson Coverdale [*Student*], Alfred Edward Green [*Student*], Miss Dorothy Margaret Heughan Park [*Student*].

By resolution of the Council the sympathy and condolences of the Royal Institute have been conveyed to their relatives.

Membership Lists

ELECTION: 14 JUNE 1955

The following candidates for membership were elected on 14 June 1955.

AS HON. ASSOCIATE (1)

Jehangir: Sir Cowasjee, Bart., G.B.E., K.C.I.E., Bombay, India.

AS FELLOWS (14)

Allsopp: Harold Bruce, B.Arch., Dip.C.D. (L'pool), A.M.T.P.I. [*A* 1935], Stocksfield.

Beswick: Robert Eastcott Edward, M.B.E., Dipl.Arch. (L'pool) [*A* 1938], Swindon.

Carter: Richard, A.A.Dipl. [*A* 1935], Petersfield.

Dobie: William Harrower Glen, T.D., Dipl. Arch. (L'pool) [*A* 1927], Liverpool.

Keyes: Julian Walter, Dip.Arch. (The Polytechnic) [*A* 1946].

Kirby: Major Arthur Douglas [*A* 1935], Swindon.

Knapper: Charles [*A* 1941], Stoke-on-Trent.

MacPherson: Donald [*A* 1921]

Messenger: Robert Michael Veitch, A.A.Dipl. [*A* 1936], Herne Bay.

Seymour: Kenneth James Hyde [*A* 1938].

Treleaven: Reginald Henry [*A* 1940].

Walkley: Gavin, M.A., M.Litt.(Cantab.), B.E. (Adelaide) [*A* 1935], Adelaide, South Australia.

Wilford: Charles Edmund [*A* 1926].

and the following Licentiate who has passed the qualifying examination:

Conway: Francis Robert Aloysius.

AS ASSOCIATES (217)

Abbott: Eric Herbert, Dip.Arch. (Birm.) Birmingham.
Addleson: Lyall Sholto, B.Arch. (C.T.).
Alexander: Clive Willis, B.A. (Cantab.), Dipl. Arch. (U.C.L.), Reigate.
Allan: Thomas Tulloch, Rutherglen.
Allen: Ronald Richard, Sheffield.
Archer: John Hugh Gordon, Manchester.
Armstrong: John Acheson, Dip. Arch. (Sheffield), Sheffield.
Arrow: Albert William, Addington.
Ashdown: Robert Allen, New Malden.
Austin: Thomas Aitken, B.Arch. (N.U.I. Dublin).
Axon: Thomas Frank, Croydon.
Ball: Thomas William.
Barclay: Robert Louis, Hythe.
Bell: Dudley Philip, B.A.(Arch.) (Lond.), Sidcup.
Belle: John Leighton, North Queensferry.
Bémant: André Edouard Serge, B.Arch. (L'pool) Bristol.
Bentley: Arthur Gordon, Newcastle-under-Lyme.
Benwell: Peter, Portsmouth.
Best: Edward Charles, Southampton.
Black: Douglas, Manchester.
Bolland: Sydney, B.Arch.(L'pool), Liverpool.
Borton: Desmond Gilbert, Epsom.
Boulting: Kenneth Frank, Bristol.
Bouskill: Brian Edward, B.A.(Arch) (Manchester), Bramhall.
Bradshaw: Peter John Dixon, Hale.
Brand: James John Whytock, D.A. (Dundee), Dundee.
Briggs: Dennis Sydney.
Bristow: David Sherwood, B.A.(Arch.) (Lond.)
Brown: Frederick Joseph, Wallasey.
Burke: John.
Caffry: Charles William, Torquay.
Castle: Paul, B.Arch (L'pool).
Chirnside: George William, D.A. (Edin.), Haddington.
Clapham: Stanley John, Dipl.Arch. (U.C.L.).
Codrington Forsyth: James Edward, Chorley Wood.
Coffin: James Henry Ford, A.R.I.C.S., Weston-super-Mare.
Cole: John Dison, Dip.Arch. (The Polytechnic).
Connaughton: John Francis, B.Arch. (N.U.I. Dublin), Tuam, Co. Galway.
Cooke: Alan George, Stanford-le-Hope.
Cooley: Neville, Birmingham.
Coombes: (Miss) Josephine, B.Arch. (Melbourne).
Cruickshank: George, Dip.Arch. (Abdn), Aberdeen.
Danby: Miles William, A.A.Dipl., Boreham Wood.
Davis: Howard Ernest Lowle, Bristol.

Dawes: George Steven, D.A.(Glas.), Kilmarnock.
Dent: (Miss) Margaret Olivia, A.A.Dipl.
Dixon: Stephen Somers, B.Arch. (L'pool) (Liverpool).
Djurkovic: George.
Dockerty: William, Dip.Arch. (Manchester), Manchester.
Dove: (Mrs.) Deirdre Cecily.
Dukes: Eric George, Gosport.
Dyas: John, Dip.Arch. (Birm.), Nuneaton.
Edge: George Trevor, Carshalton Beeches.
Edleston: James Harcourt, Nantwich.
Egeland-Jensen: (Mrs.) Pamela Elizabeth. Dip. Arch. (The Polytechnic), Cardiff.
Elkerton: William James, Tonbridge.
Engleback: Norman William.
Entwistle: Donald Kitson, Rochdale.
Fehily: James Anthony, B.Arch. (N.U.I. Dublin), Hill of Down, Co. Meath.
Fleck: (Mrs.) Rosalind Joyce, Norwich.
Fleming: Norman Matthew, Carrickfergus, Co. Antrim.
Fowler: Edward Michael Coulson, Dip.Arch. (Auck., N.Z.), Feilding, New Zealand.
Fraser: Donald, Airdrie.
Fraser: Malcolm Porteous, B.Arch. (C.T.), George, C.P., S. Africa.
Fretwell: Cyril, Dip.Arch. (Sheffield), Barnsley.
Gent: Raymond, Bournemouth.
George: Graham Robert, Bristol.
Gilonis: Bernard Anthony.
Glass: Thomas, Chelmsford.
Godwin: Michael George, M.A. (Cantab.), Bewdley.
Graham: Robert Craig, Workington.
Grant-Nelson: Alexander Walter MacKay, Surbiton.
Green: Michael Edward, Hornsea.
Grinstead: John Raymond Harrison, Brighton.
Hall: Gordon David, Hull.
Hallam: Harry Stanley.
Hamlyn: (Mrs.) Ann Felicity, Dip.Arch. (The Polytechnic).
Hardy: John Alfred, Woodford Green.
Headings: Cyril Lawrence.
Hellard: Ronald Baden, Dip.Arch. (The Polytechnic).
Hendry: William Smith, Buckie.
Hews: Daryl Alexander, Datchworth.
Hickling: Cliffe, Ambleside.
Hickman: Alan Douglas Vernon, Dip.Arch. (Birm.), Birmingham.
Hicks: Maurice George, Gateshead.
Hoare: Ronald Wilfrid Charles, Aldermaston.
Hoile: John P., A.A.Dipl.
Howard: Geoffrey Edgar, B.A.(Arch.) (Manchester), Upminster.
Hubbard: Noel Sisson, Exeter.
Humphries: Derek James.
Hunter: William Norman, D.A.(Edin.), Portobello.
Huntley: Colin Alan Trevor, Dip.Arch. (The Polytechnic).
Huntley: Rex, Dipl.Arch. (Leeds), Thornton Heath.
Illingworth: Thomas Lewis Day, Dip.Arch. (Manchester), Wellingborough.
James: Philip Lionel, Swansea.
Jeffries: Denis William, Welwyn Garden City.
Johnson: Albert Edward, Hereford.
Jones: Geoffrey Graham, Wolverhampton.
Kemp: Anthony, Dip.Arch. (The Polytechnic).
Kendrick: Peter John, Ashford, Kent.
Kennett: Royston Alexander George, Harlow.
Kershaw: Douglas John, Maidstone.
Kirkbride: Kenneth Michael George, A.A.Dipl. Mullion.
Kirsch: (Mrs.) Diana, B.Arch. (Rand).
Lam: Paul Yuen-Yam, Hong Kong.
Larkin: William Edward, Long Ditton.
Lawson: Handel Kitchener, D.A. (Edin.) Jamaica, British West Indies.
Leech: Brian Arthur, Dip.Arch. (The Polytechnic).
Lees: Derrick.
Lewis: David Reynolds, Dip.Arch. (The Polytechnic), Bexleyheath.
Lloyd: Barry James, Cheltenham.
Longson: Sydney Howard, Jersey, Channel Islands.
Luckman: Stanley John, Trowbridge.
Lumb: Lewis Frederick, Boreham Wood.
Mabane: Brian Herbert, Dip.Arch. (Dunelm), Chelmsford.
Mackenzie: Francis Albert Alexander.
Mackintosh: William, D.A. (Glas.), Glasgow.
McOnegal: Edward Alan, Maidstone.
Males: Alan Roderick, Oldham.
Maskill: Alec Burnell, Dip.Arch. (Sheffield), Mansfield.
Mellers: Gilbert, Stroud.
Mennie: Alexander, Dip.Arch. (Abdn.), Insch.
Meredith: Bernard Nelson, B.A. (Cantab.).
Milne: Alastair Mackenzie, D.A. (Edin.), Bannockburn.
Minchell: Cyril Sinclair, Shrewsbury.
Minshull-Beech: Dennis William, Dip.Arch. (Manchester), Waterford, Ireland.
Mirrington: Roland Douglas, Colchester.
Mitchell: Leslie Douglas, D.A. (Edin.), Edinburgh.
Molesworth: Robert Mackinnon, B.A. (Cantab.) Reading.
Moore: John Michael.
Morhaim: Nissim O.
Moyes: Antony Francis, Dip.Arch. (The Polytechnic), Thornton Heath.
Murray: Alan Cameron, Banstead.
Neivens: Kenneth Arthur.
Neve: Eric Easter, Ware.
Newton: Kenneth, Timperley.
Ogden: Tom Edward, B.A. (Cantab.) Dip.Arch. (Birm.), Harlow.
Page: Peter Alan, B.A. (Arch.) (Sheffield), Leighton Buzzard.
Panter: Kenneth Humphrey, Bristol.
Parry: Richard Gordon, Manchester.
Parsons: Harry, B.Arch (L'pool), Liverpool.
Payne: Roy, Coventry.
Poniatowski: Antoni, Barry.
Pring: John Gabriel Ranson, Westcliff.
Procter: John Desmond, B.Arch. (L'pool), Carnforth.
Rankin: Thomas, D.A. (Dundee), Glasgow.
Raynor: Louis Victor, Westcliff-on-Sea.
Read: Arthur Maurice, Walsall.
Read: Robert William, Grantham.
Redfern: John Alan, Dip.Arch. (Nottm.), Derby.
Redstone: Eric John.
Reeves: Michael Kynaston, Swindon.
Reid: Alan, Plymouth.
Richards: John Deacon, Brentwood.
Roberts: John Trevor, Ampthill.
Robertson: Stewart, D.A. (Dundee), Hawick.
Robinson: Peter Walter.
Rolf: Colin Evelyn, Ryde, Isle of Wight.
Ross: David Douglas Gordon, Dip.Arch. (Abdn.), Exmouth.
Ross: John Alexander Henry, D.A. (Edin.), Edinburgh.
Rothery: Sean, B.Arch. (N.U.I. Dublin), Sandyford, Co. Dublin.
Rowson: Anthony Philip, Dip.Arch. (Birm.), Birmingham.
Saunders: David Peter, Westcliff-on-Sea.
Sharpe: John Brendan, Chippenham.
Silvester: William Geoffrey, Newport, Mon.
Simmonds: John Michael, Whitstable.
Sinclair: Robert David, East Kilbride.
Singleton: Reginald Arthur, M.B.E., Bradford.
Slade: David, Dipl.Arch. (Oxford).
Small: John, Hove.
Smith: Colin.
Smith: Robert, Rugby.
Sofaer: Julian George, A.A.Dipl.
Sowersby: William George James.
Speller: Dennis.
Spencer: Alan, Manchester.
Stonelake: Douglas Walter.
Sutcliffe: Ernest Edward, Blackpool.
Sutcliffe: (Miss) June Elizabeth, B.Arch. (Dunelm), Carlisle.
Tapp: David Redvers, Chelmsford.
Taylor: Ian, Dip.Arch. (Manchester), Dukinfield.
Taylor: James Thomas Reekie, D.F.C., Cambridge.
Teare: Frederick, Lytham St. Annes.
Thaxton: (Mrs.) Mary Elizabeth, B.Arch. (L'pool), Liverpool.
Thomas: Alan Ritchie.
Throssell: Eric Ronald, Wallingford.
Tims: Charles Harry Gratton.
Towell: John William Archibald, Dip.Arch. (Sheffield), Middlesbrough.
Turkson: Peter Nathaniel Kwegyir, B.Arch. (L'pool), Liverpool.
Turland: Montague James, Dip.Arch. (The Polytechnic).
Turner: Frank.
Turner: John Julian, Chichester.
Turner: Maurice Walter, Southsea.
Von Schramek: Eric Emil, North Adelaide, South Australia.
Walker: Ronald Edward, Liverpool.
Wall: Allen Edwin, Dip.Arch. (C.T.).
Walmsley: Anthony John, B.Arch. (L'pool), Northampton.
Walton: Eirikur Samuel, Hull.
Ware: Peter John Wallace, Bristol.
Watson: Lawrence Ernest, Rotherham.
Webb: Horace Leslie.
Webber: Geoffrey Philip, B.Arch. (Sydney).
Weitzel: Alan Henry Richard, Ilford.
Weller: John Brian, Dip.Arch. (Birm.), Wolverhampton.
West-Jones: Alan, Swansea.
Whitehead: Arthur, Dipl.Arch. (Leeds), Batley.
Wickham: Henry Lewis.
Williams: John Howard, B.Arch. (C.T.).
Wilson: Norman Terence, Dip.Arch. (The Polytechnic), Richmond, Surrey.
Winder: Peter, Leigh-on-Sea.
Woodcock: Gerald Noel, St. Brelades, Jersey, C. I.
Worrall: (Mrs.) Jill Mary, B.A.(Arch.) (Lond.).
Worrall: William Bryan, Dipl.Arch. (U.C.L.).
Worskett: Royston Roffey, Horsham.
Wright: Keith Colin John.
Yap: Pow Veng.
Yexley: Harold George, Dipl.Arch. (Oxford).

AS LICENTIATES (4)

Bromley: Geoffrey Owen, Ashford, Kent.
Chapman: Arthur Henry, M.B.E., M.A. (Cantab.), Cambridge.
Krejsa: Sidney Ralph, Maidstone.
Smith: Lionel Stewart.

ELECTION: 11 OCTOBER 1955

An election of candidates for membership will take place on 11 October 1955. The names and addresses of the candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Tuesday 2 August 1955.

The names following the applicant's address are those of his proposers.

AS FELLOWS (11)

Cole: Charles Alan Crozier [*A* 1936], One, Belmont, Bath, Somerset; Greenways, 132 Fairfield Park Road, Bath. Prof. A. E. Richardson, G. A. Jellicoe, T. W. Snailum.

Davie: Eric Hill, A.M.T.P.I. [*A* 1940], 77

Grosvenor Street, W.1; 4A Circus Road, St. John's Wood, N.W.8. P. V. Burnett, J. A. Slater, Donald Macpherson.

Egan: Michael Henry, A.A.Dipl. [*A* 1940], 297 Oxford Street, W.1; 13 Belvedere Grove, Wimbledon, S.W.19. Sir Howard Robertson, A. S. G. Butler, G. B. Tubbs.

Fielden: Frank, M.A. [*A* 1941], 27 Ridley Place, Newcastle upon Tyne; 18 Stephenson Terrace, Wylam, Northumberland. Prof. W. B. Edwards, Prof. J. S. Allen, J. H. Napper.

Kay: Harold Askew [*A* 1941], Victoria Chambers, 94 High Street, Stourbridge, Worcs.; 'Grantchester', Hagley Road, Pedmore, Stourbridge. L. C. Lomas, J. H. Jones, H. P. Hing.

Matthew: Robert Hogg, C.B.E., M.A. [*A* 1931], Professor of Architecture, University of Edinburgh; 8 Palmerston Place, Edinburgh; Keith Marischal, Humbie, East Lothian. Dr. J. L. Martin, Prof. Sir William Holford, Prof. Sir Patrick Abercrombie.

Roberts: Frederick Charles, B.Arch. (L'pool.) [*A* 1938], Earl Chambers, Mold, Flintshire; Bryn Awel, Mold. Douglas Hall, P. M. Padmore, H. A. Clark.

Wilson: William Gregory, B.Arch (L'pool), [*A* 1937], 16 Bishop Lane, Hull, E. Yorks.; The Old Parsonage, Swanland, North Ferriby, E. Yorks. J. Konrad, J. P. Taylor, H. Andrew.

Wood: Leslie Charles [*A* 1940], Messrs. Moiret and Wood, 181 Queen Victoria Street, E.C.4; 50 Bloomsbury Street, W.C.1. E. T. A. Smith, S. N. Cooke, George Whitby.

Woolley: Frederick Ernest [*A* 1933], Messrs. Cecil Howitt and Partners, St. Andrew's House, Mansfield, Nottingham; 2 St. Ann's Hill, Nottingham. Cecil Howitt, F. W. C. Gregory, Major L. Darbyshire.

and the following Licentiate who has passed the qualifying examination:

Alexander: Maurice, 174 Sloane Street, S.W.1; 3 St. Albans Avenue, Bedford Park, W.4. Applying for nomination by the Council under Bye-law 3(*d*).

AS ASSOCIATES (102)

The name of a school, or schools after a candidate's name indicates the passing of a recognised course.

Abbott: Derek Anthony de-Greeff, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), Hewshott House, Liphook, Hants. C. D. Carus-Wilson, The Hon. Lionel Brett, Kenneth Bayes.

Anderson: David Arthur Frederick (Arch. Assoc. (London): Sch. of Arch.), 2 Kimberley Road, Southsea, Hants. A. C. Townsend, J. V. Nisbet, R. L. Reynish.

Austin: Kenneth Vincent (Special Final), 'Cornerways', Bayworth, Nr. Abingdon, Berks. G. R. Hutton, H. W. Smith, David Booth.

Baldwin: Stanley Frank (Final), 1901, London Road, Leigh-on-Sea, Essex. J. M. Scott, P. F. Burridge, J. C. Clavering.

Barclay: David Nicol, B.A. (Cantab.) Dip.Arch. (Birm.), 32 Lyndewode Road, Cambridge. A. Douglas Jones, F. J. Osborne, David Roberts.

Barden: Geoffrey, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), 47 Myrtle Street, Liverpool, 7. Prof. R. Gardner-Medwin, B. A. Miller, R. R. Young.

Barratt: John Neville, Dip.Arch. (Birm.) (Birmingham Sch. of Arch.), 24 Bell Road, Walsall, Staffs. A Douglas Jones, T. M. Ashford, J. H. Jones.

Barsby: Graham Anthony, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 27 Grange Hill, The Hale, Edgware, Middlesex. C. G. Bath, S. F. Burley, H. Bramhill.

Batchelor: David Gray, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), Brockley Grange Farm, Brockley Hill, Stanmore, Middlesex. Prof. A. E. Richardson, C. G. Bath, Marshall Sisson.

Ben-Attar: Jacob, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 18a Allingham Court, Haverstock Hill, Hampstead, N.W.3. J. S. Walkden, R. F. Jordan, David Jenkin.

Blanchard, Bernard William (Final), 27 Kingston Road, Willerby, East Yorks. Allanson Hick, W. B. Wheatley, J. Konrad.

Boatman: Colin Douglas, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 78 Regents Park Road, N.W.1. Arthur Korn, R. F. Jordan, E. Playne.

Booth: Michael George, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 'Harvilla', Sutton Scotney, Nr. Winchester, Hants. Arthur Korn, I. G. Smith, W. B. Stedman.

Brown: Ian Clinton, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 20 East End Road, Finchley, N.3. Howard Lobb, John Ratcliff, C. G. Bath.

Brown: Ian Gilbert, B.Arch. (Dunelm) (King's Coll. (Univ. of Durham) Newcastle upon Tyne, Sch. of Arch.), 2 Whitby Avenue, Whitburn, Co. Durham. J. H. Napper, G. R. Clayton, Dale Cuthbertson.

Buchwald: Lucjan (Final), 36 Southdean Gardens, S.W.19. Dr. J. L. Martin, J. Berger, A. E. Miller.

Burford: Charles Henry (Final), 8 Egerton Road, South Norwood, S.E.25. Stanley Hamp, George Lowe, S. F. Burley.

Burt: John Deaville, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 91 Howard's Lane, Putney, S.W.15. V. O. Rees, C. L. Gill, C. G. Bath.

Caddy: Hubert Rowland (Final), 36 DeMontford Road, Lewes, Sussex. K. E. Black, S. H. Tiltman, F. F. Howard.

Cartwright: Andrew St. George (Arch. Assoc. (London): Sch. of Arch.), Cullion, Co. Londonderry. Arthur Korn, H. G. Goddard, R. F. Jordan.

Chrystal: Alexander (Arch. Assoc. (London): Sch. of Arch.), 170 Bromham Road, Bedford, Beds. W. G. Walmsley, Major B. C. Deacon, G. A. Crockett.

Cordingley: Lawrence Norton, Dipl.Arch. (Leeds) (Leeds Sch. of Arch.), 'Ebor', Kingsway Drive, Ilkley, Yorks. F. Chippindale, D. A. Fowler, W. A. Eden.

Coward: John Reynolds, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), 23 Holland Street, Ebbw Vale, Monmouthshire. Prof. R. Gardner-Medwin, Prof. H. M. Wright, Prof. L. B. Budden.

Crawforth: Colin Peter (Final), 29 Southgate, Hornsea, East Yorks. J. Konrad, Allanson Hick, L. A. Reynolds.

Croft: David John Nash, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 23 Elm Avenue, Watford Heath, Herts. C. G. Bath, H. Bramhill, S. F. Burley.

Cross: David Wilson, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), c/o The Hall Farm, Tasburgh, Norwich. Prof. R. Gardner-Medwin, Walter Goodesmith, Prof. L. B. Budden.

Crosse: Simon Courtenay (Arch. Assoc. (London): Sch. of Arch.), 24 Harley Street, W.1. Arthur Korn, R. F. Jordan, H. E. Moss.

Cutlack: James Norman Hewett, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 105 Tierney Road, Streatham Hill, S.W.2. Howard Lobb, John Ratcliff, C. G. Bath.

Cutmore: Leslie Albert, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 'Courtfield', Hillbrow Road, Esher, Surrey. C. G. Bath, S. F. Burley, H. Bramhill.

Davidson: Ian Alexander, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 'Marsule', Craig Road, Dingwall, Ross-shire. J. R. McKay, T. W. Marwick, W. H. Kininmonth.

Dockeray: William Denne, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), Cold Harbour Farm, Kingston, nr. Canterbury, Kent. R. F. Jordan, H. G. Goddard, Anthony Swaine.

Doyle: Richard Thomas Wallace, Dipl.Arch. (Northern Polytechnic) (Northern Poly.: (London): Dept. of Arch.), The White Cottage, Loudwater Lane, Rickmansworth, Herts. C. G. Bath, B. W. Turnbull, S. F. Burley.

Evamy: Michael Everett, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 95 The Walk, Potters Bar, Middlesex. C. G. Bath, H. Bramhill, Frankland Dark.

Evans: Christopher Owen Rhys, B.A. (Cantab.) (Arch. Assoc. (London): Sch. of Arch.), 28 The Little Boltons, S.W.10. Arthur Korn, Cyril Mardall, C. L. Gill.

Evans: Peter Gwynne Ansdell, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), 59d Kensington Court, W.8. Prof. L. B. Budden, B. A. Miller, D. S. Taylor.

Falk: Brian Geoffrey, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 7 Sheldon Avenue, N.6. F. T. Orman, G. I. C. Highet, I. F. Roberts.

Finlayson: Alexander, D. A. (Dundee) (Dundee Coll. of Art: Sch. of Arch.), Commercial Bank Buildings, Aberfeldy, Perthshire. John Needham, T. H. Thoms, W. S. Gauldie.

Fletcher: William Alfred (Special Final), 3 Meadowcroft Way, Orwell, Royston, Herts. T. S. Shearer, David Roberts, J. H. Napper.

Galastegi: Lander, B.Arch. (N.U.I., Dublin) (Univ. Coll., Dublin, Ireland: Sch. of Arch.), 2 St. Stephens Green, Dublin, Ireland. Prof. J. V. Downes, Vincent Kelly, P. J. F. Munden.

Gardner: John Thomas (Final), 79 Stradella Road, Herne Hill, S.E.24. Edwin Rice, H. C. Inglis, Guy Morgan.

Gell: Eric, Dipl.Arch (Leeds) (Leeds Sch. of Arch.), 25 Kingston Road, Thackley, Bradford, Yorks. F. Chippindale, D. A. Fowler, W. Illingworth.

Gibbs: Peter Malcolm, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 76 Tanfield Road, Croydon, Surrey. Arthur Korn, J. W. Macgregor, R. F. Jordan

Goldsmid: Ian Alexander, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 22a Bolton Road, Chiswick, W.4. H. H. Clark, C. G. Bath, H. Bramhill.

Greenbury: Stephen William, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 52 Christchurch Avenue, Brondesbury, N.W.6. C. G. Bath, H. Bramhill, S. F. Burley.

Grimwade: Nigel Ralph (Arch. Assoc. (London); Sch. of Arch.), 36 Lillie Road, S.W.6. Arthur Korn, D. L. Bridgwater, H. T. Cadbury-Brown.

Hall: James Barrie, Dip.Arch. (Birm.) (Birmingham Sch. of Arch.), 63 Etwall Road, Hall

Green, Birmingham, 28. A. Douglas Jones, A. R. Twentyman, T. M. Ashford.

Harris: John (Bartlett Sch. of Arch.: Univ. of London), 7 Mulberry Walk, Shirley, Southampton. Prof. H. O. Corfiato, S. L. Thomson, R. C. White-Cooper.

Hepple: (Miss): Patricia Mary (Arch. Assoc. (London): Sch. of Arch.), 'The Brook', Stamford Brook, W.6. H. G. Goddard, Oliver Law, Gordon Gillman.

Hill: Peter Edmund Benson, Dipl.Arch. (Leeds) (Leeds Sch. of Arch.), 45 Leeds Road, Ilkley, Yorks. F. Chippindale, D. A. Fowler, R. H. Winder.

Hodges: Raymond Allen (Arch. Assoc. (London): Sch. of Arch.), 'Little Bishops', Bishops Down Park Road, Tunbridge Wells, Kent. G. H. N. Inman, H. J. Axten, C. L. Burns.

Jenkins: David Charles Henry (Final), 54 Broughton Avenue, Redhill, Bournemouth, Hants. R. A. Phillips, T. H. B. Burrough, G. D. G. Hake.

Johnston: Thomas James (Final), 92 Christchurch Street, Ipswich, Suffolk. J. M. Scott, E. J. Symcox, A. V. Lobban.

Kot: Jan (Final), 5 Palmerston Road, Sheffield, 10. Prof. L. B. Budden, W. G. Davies, W. L. Clunie.

Kowalski: Szczepan Marian (Special Final), 40 Milton Road, S.E.24. Applying for nomination by the Council under Bye-law 3(*d*).

Lack: Henry Chester, B.Arch., Dip.Arch. (Melbourne) (Passed a qualifying Exam. approved by the R.A.I.A.), 19 St. Marks Crescent, Regents Park, N.W.1. Frankland Dark, R. L. Banks, Denys Lasdun.

Land: Peter David, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 66 Edinburgh Road, Norwich, Norfolk. Arthur Korn, T. G. Scott, Prof. A. E. Richardson.

Langlands: Iain Ralph, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 'Peakletts', Upper Tilton Farm, Firle, nr. Lewes, Sussex. C. G. Bath, J. W. Macgregor, James Maitland.

Langlay-Smith: Gerald Michael, D. A. (Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 'Guinfeld Cottage', Wingfield Road, Alfreton, Derbyshire. J. R. McKay, W. H. Kininmonth, T. W. Marwick.

Lankey: Peter Grant (Arch. Assoc. (London): Sch. of Arch.), 82 Ladbroke Road, Holland Park, W.11. Arthur Korn, R. N. Vanes, R. F. Jordan.

Legge: Hugh Roger, Dip.Arch. (Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 404 King Street, Aberdeen. E. F. Davies, A. G. R. Mackenzie, J. G. Marr.

Lenon: (Mrs.) Jane Alethea, Dipl.Arch. (Oxford) (Sch. of Tech. Art and Commerce, Oxford: Sch. of Arch.), 15 Smith Terrace, S.W.3. J. R. Tolson, David Beecher, R. W. Cave.

Litchfield: Patrick (Final), 'Kingsmead', Kinross Road, Bournemouth, Hants. T. H. B. Burrough, G. W. Jackson, F. L. Hannam.

Mason: Richard Granville, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), Upland Gate, Bishops Hill, Ipswich, Suffolk. C. G. Bath, M. J. Slater, S. F. Burley.

Meager: Michael Anthony (Arch. Assoc. (London): Sch. of Arch.), 40 Park Mansions, Prince of Wales Drive, S.W.11. Arthur Korn, R. F. Jordan, C. L. Gill.

Miller: William Alistair, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), Gartferry Hotel, Ayr. W. H. Kininmonth, J. R. McKay, W. E. Hollins.

Milne: Peter, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.) 51 Mosslea Road, Whyteleafe, Surrey. C. G. Bath, H. Bramhill, S. F. Burley.

Morris: Francis Clement Morris (Final), 23 Cuckmere Lane, Millbrook, Southampton. R. W. Cave, G. R. Hutton, L. J. Ashby.

Norwood: Gerald (Final), 50 Belvedere Road, Leyton, E.10. D. W. Aldred, R. O. Foster, H. Lidbetter

Ouseley: Michael Crawley, Dip.Arch. (Birm.) (Birmingham Sch. of Arch.), 'Tranquille' Ilmington Road, Whitchurch, Stratford-upon-Avon, Warwickshire. A. Douglas Jones, R. G. Cox, E. L. Gale.

Palmer: James Raymond Burkitt, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), 16 Barton Road, Barton Seagrave, Kettering, Northants. Prof. R. Gardner-Medwin, Prof. H. M. Wright, B. A. Miller.

Pearce: Alan William, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 114 Sunny Gardens Road, Hendon, N.W.4. C. G. Bath, C. H. Aslin, S. F. Burley.

Penhey: Arthur David (Final), 333 Haydons Road, S.W.19. T. J. Lynch, Paul Nightingale, Norman Keep.

Prendergast: Michael Denis, B.A.(Arch.) (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), c/o Borough Architect's Department, Civic Centre, Southampton. Prof. R. A. Cordingley, Prof. Clifford Holliday, E. S. Benson.

Reid: Anthony John, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.) 2 Norman Avenue, Twickenham, Middlesex. C. G. Bath, H. Bramhill, S. F. Burley.

Richards: Dennis Frederick (Final), 11 Studley Grange Road, Hanwell, W.7. L. T. Moore, George Whitby and applying for nomination by the Council under Bye-law 3(*d*).

Ringrose: Leonard Horace Augustus (Final), 26 Cobbett Road, Portsmouth, Hants. A. C. Townsend, A. L. Smith, Frank Mellor.

Roberts: Robert Arthur, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), 'Grug Annedd', Plas Road, Holyhead, Anglesey. Prof. R. Gardner-Medwin, Prof. L. B. Budden, Prof. H. M. Wright.

Ross: Archibald David Campbell, B.A.(Cantab.) (The Poly., Regent Street, London: Sch. of Arch.), 42 Gloucester Walk, W.8. J. S. Walkden, E. D. Mills, John Grey.

Rutherford: Derek Alfred, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 235 Tubbenden Lane, Orpington, Kent. C. G. Bath, Dr. J. L. Martin, S. F. Burley.

Schultz: Ronald, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 105 Evelyn Court, Amhurst Road, E.8. C. G. Bath, H. Bramhill, S. F. Burley.

Sharp: John Vernon (Arch. Assoc. (London): Sch. of Arch.), 61 Stradella Road, S.E.24. Arthur Korn, Sir Hugh Casson, W. Marmorek.

Sharp: Kenneth, Dip.Arch. (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 77 Gleneagles Road, Flixton, Manchester. Prof. R. A. Cordingley, Dr. W. A. Singleton, Harold Bowman.

Smith: Brian Edward (Arch. Assoc. (London): Sch. of Arch.), 39 Stratford Road, Luton, Beds. Peter Dunham, Arthur Korn, R. F. Jordan.

Smith: Peter Griggs, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 10 Pindock Mews, Warwick Avenue, W.9. R. F. Jordan, A. S. Gray, W. H. Watkins.

Stableford: Charles Rodney, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 55 Hamilton Terrace, St. John's Wood, N.W.8. Arthur Korn, George Fairweather, R. J. H. Minty.

Staniland: Richard Leslie, Dip.Arch (Sheffield) (Univ. of Sheffield, Dept. of Arch.), 22 Town Moor Avenue, Doncaster, Yorks. Prof. Stephen Welsh, H. B. Leighton, H. A. Hickson.

Stephenson: Charles John, Dip. Arch. (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 61 Gloucester Avenue, Scotforth, Lancaster. Prof. R. A. Cordingley, Dr. W. A. Singleton, E. S. Benson.

Swann: (Miss) Margaret Adie (Arch. Assoc. (London): Sch. of Arch.), 14 Evelyn Mansions, Carlisle Place, S.W.1. C. H. Stableford, R. F. Jordan, Arthur Korn.

Swann: Victor (Special Final), 43 Hillside Road, Southall, Middlesex. R. T. Boutall, C. G. Pinfold, A. C. Hopkinson.

Thompson: Alan Douglas, Dip.Arch (Manchester) (Victoria Univ., Manchester: Sch. of Arch), No. 1, The Corners, Rossall Beach, Cleveleys, Lancs. Prof. R. A. Cordingley, Dr. W. A. Singleton, E. S. Benson.

Thomson: Keith, Dip. Arch. (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 209 Sale Road, Northern Moor, Wythenshawe, Manchester. Prof. R. A. Cordingley, Dr. W. A. Singleton, E. S. Benson.

Tolson: James Archer (Arch. Assoc. (London): Sch. of Arch.), 85 Albert Palace Mansions, Lurline Gardens, S.W.11. R. F. Jordan, Gordon Gillman, Oliver Law.

Tompsett: Ralph Hugh, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 'Wasdale', 160 Black Fen Road, Sidcup, Kent. C. G. Bath, H. Bramhill, S. F. Burley.

Turnbull: Peter Leslie (Arch. Assoc. (London): Sch. of Arch.), 39 Benhill Wood Road, Sutton, Surrey. Arthur Korn, R. F. Jordan, H. G. Goddard.

Vasbenter: Albert Louis (Final), 31 Tavistock Gardens, Ilford, Essex. Dr. J. L. Martin, J. Berger, A. E. Miller.

Waller: Paul William, Dipl. Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 'Brambledown', Burnham Green Road, Tewin Wood, Herts. J. K. Robertson, K. J. R. Peacock, D. M. Hodges.

Watkins: (Miss) Judith (Arch. Assoc. (London): Sch. of Arch.), 'The Brook', Stamford Brook, W.6. Dr. J. L. Martin, H. G. Cherry, Arthur Korn.

Weldon: Peter Dennis, Dipl. Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 186 Iford Lane, Southbourne, Bournemouth, Hants. C. G. Bath, S. F. Burley, H. Bramhill.

Williams: James Cronshaw, Dip.Arch. (Sheffield) (Univ. of Sheffield, Dept. of Arch.), 63 Brecks Crescent, Rotherham, Yorkshire. Prof. Stephen Welsh, J. W. Davidson, Robert Cawkwell.

Wilson: John Vincent, M.C.D., B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), c/o Borough Architect's Department (Planning), Civic Centre, Southampton. Prof. L. B. Budden, Prof. R. Gardner-Medwin, B. H. Dale.

Wimbleton: John Francis (Arch. Assoc. (London): Sch. of Arch.), 38 Ridgeway Crescent,

Tonbridge, Kent. Arthur Korn, J. W. Buchanan, H. G. Coulter.

Younger: Robert Paul, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 26 Lennox Gardens, S.W.1. Michael Waterhouse, L. T. Moore, Lord Mottistone.

AS LICENTIATES (5)

Cunningham: Joseph, Messrs. Peter Hing and Jones, 121 Colmore Row, Birmingham, 3; 44 Peacock Road, Birmingham, 14. J. H. Jones, H. W. Weedon, H. P. Hing.

Hearn: Wilfred Roy Edmund, Midlands Electricity Board (Birmingham and District Sub Area), 14 Dale End, Birmingham, 4; 12 Ashfield Avenue, Kings Heath, Birmingham, 14. F. L. Randle, E. Watson, A. R. Young.

Hooper: Victor Claude, c/o Messrs. R. M. Challice and Son, 4 Queens Terrace, Exeter; 31 South Lawn Terrace, Heavitree, Exeter. John Challice, John Bennett, H. M. R. Drury.

Kelf: Jasper Lakeman, c/o The Ministry of Works, S.W.1; 24 Alexandra Gardens, Hounslow, Middlesex. Prof. A. E. Richardson, E. A. S. Houfe, P. K. Hanton.

Smith: Captain Edgar Harry, 44 Montagu Gardens, Wallington, Surrey. The late Charles Brett, E. H. Banks, S. G. Jeeves.

ELECTION: 1 NOVEMBER 1955

An election of candidates for membership will take place on 1 November 1955. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Friday 14 October 1955.

AS FELLOWS (2)

Fraser: James Milner, C.B.E., M.T.P.I. [*A* 1929], Singapore Improvement Trust, Upper Pickering Street, Singapore; 14 Kay Siang Road, Singapore. W. I. Watson, K. A. Brundle, C. Y. Koh.

Patki: Janardan Ganesh [*A* 1938], Messrs. Bell & Co.'s Premises, 19 Sir Phirozshah Mehta Road, Fort, Bombay 1, India; 548–B Ganesh Bhuwan, Seth Bhagwandas Road, Matunga, Bombay 19. M. K. Jadhav, S. H. Parelkar, H. N. Dallas.

AS ASSOCIATES (14)

Ang: Kheng Leng, B.Arch (Manitoba) (Univ. of Manitoba, Canada: Dept. of Arch.), 5 Bonham Building, Chulia Street, Singapore 1. K. S. Ng, W. I. Watson, K. A. Brundle.

Barnett: Jack, B.Arch. (C.T.) (Passed a qualifying Exam. approved by I.S.A.A.), 55 Hout Street, Cape Town, S. Africa. O. Pryce-Lewis, Prof. L. W. T. White, M. Policansky.

Barve: Vasant Purushottam (Final), c/o National Housing and Town and Country Development Board, P.O. Box 242, Rangoon, Burma. Prof. S. S. Reuben, S. H. Parelkar, H. N. Dallas.

Blomfield: Leslie Arthur Albert (Special Final), c/o P.O. Box 262, Lusaka, Northern Rhodesia. J. M. Scott, A. L. Spencer, G. B. Drury.

Dansey: John Huia Barter, Dip. Arch. (Auck., N.Z.) (Passed a qualifying Exam. approved by the N.Z.I.A.), 34 Bassett Road, Remuera, Auckland, New Zealand. Prof. C. R. Knight, Prof. A. C. Light, W. H. Gunmer.

Darling: Patrick Munro Coalbank (Arch. Assoc. (London): Sch. of Arch.), Stationsgatan, 60, Box 38, Luleå, Sweden. Arthur Korn, R. F. Jordan, H. G. Goddard.

Diserens: Marcel Alexis (Special Final), P.O. Box 137, Lusaka, Northern Rhodesia. A. L. Spencer, R. J. Duke, Clifford Duke.

Elliott: Julian Arnold, B.Arch. (C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.). P.O. Arnoldton, East London, S. Africa. Prof. L. W. T. White, O. Pryce-Lewis and applying for nomination by the Council under Bye-law 3(*d*).

Garrett: Robert Michael, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 1996 West 14th Avenue, Vancouver, B.C., Canada. Arthur Korn, Max Lock, R. F. Jordan.

Garson: Henrik Ulsten, B.Arch. (C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.). P.O. Box 251, Kitwe, Northern Rhodesia. Prof. L. W. T. White, O. Pryce-Lewis and applying for nomination by the Council under Bye-law 3(*d*).

Gosschalk: Bernard Louis, B.Arch. (C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.), c/o Standard Bank, Adderley Street, Cape Town, S. Africa. Prof. L. W. T. White, O. Pryce-Lewis, and applying for nomination by the Council under Bye-law 3(*d*).

Hall: Edmund, Dip.Arch. (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 368 D.C.R.E., Sennelager, B.A.O.R. 16. Prof. R. A. Cordingley, Dr. W. A. Singleton, E. S. Benson.

Tulitt: Francis Edginton (Passed a qualifying Exam. approved by the I.S.A.A.), P.O. Box 192, Margate, Natal, S. Africa. A. M. Allen, N. O. Jackson, and applying for nomination by the Council under Bye-law 3(*d*).

Webber: (Mrs.) Jill Elizabeth, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), c/o Architect, Headquarters P.W.D., Kaduna, Northern Nigeria, British West Africa. Prof. L. B. Budden, F. X. Velarde, Herbert Thearle.

Obituaries

Miss Hilda Mason [*A*] died after an emergency appendix operation on 14 April, aged 75. Mr. Eric Sandon [*A*] has supplied the following account of her career:

'Miss Mason took up architecture during the 1914–18 war, in which she also served as a fully trained V.A.D. Realising the shortage of manpower, she taught herself typing and was employed by Mr. Munro Cautley [*A*] as secretary and tracer in his Ipswich office. At the age of 39 she then went to the Architectural Association School of Architecture where she passed her Final in three years. She was among the very few first women to qualify as architects.

'About 1920 she began private practice on her own account, and shortly afterwards won an Ipswich housing scheme competition. She was appointed Diocesan Surveyor to the Diocese of St. Edmundsbury and Ipswich, and carried out numerous other jobs such as the Nurses' Home, Felixstowe, additions to the Convalescent Home, Felixstowe, and a good deal of domestic work. In 1930, in conjunction with Mr. Raymond Erith [*F*], she was appointed architect to the new Church of St. Andrew, Felixstowe. This is believed to have been one of the first churches in the country to be built entirely in reinforced concrete, and she went over to Paris in order to study Perret's concrete church at Raincy. In 1932 she designed her own house, King's Knoll, at Woodbridge, Suffolk, on a site above the River Deben with magnificent views. She employed flat roofs and large windows in a concrete and brick house of a striking, non-traditional design.

'About 1928, Hilda Mason followed Mr. Martin Slater [*F*] as Honorary Secretary of the newly-formed Suffolk Association of Architects. She tackled with enthusiasm the formation of the advisory panel of architects, and in this connection compiled a booklet of suggestions to those about to build houses in Suffolk, and this booklet was issued to a large number of builders and other interested people with a definite effect in improving the designs submitted later to the panel.

'She was a regular attendant at the Secretaries' Conference where she was a well-known and respected figure. Her modest and charming personality made her an ideal secretary, and her long service to the Association was recognised on her retirement in 1947 by a presentation.

'She took a great interest in everything to do with the Suffolk scene, being a member of the Suffolk Preservation and Archaeological Societies, the C.P.R.E., and serving on the Executive and Village Halls Committees of the Rual Community Council. Wherever good design and planning, and the touch of beauty, were wanted, either in building or landscape, she was enthusiastic in advice and co-operation.'

Charles Geoffrey Blomfield [*Retd. F*] died on 10 March, aged 69.

After being articled as a quantity surveyor to Messrs. Tucker and Huntley Mr. Blomfield was for a time on the staff of the Public Works Department in New Delhi as an assistant architect. In 1918 he started his own practice which his brother F. B. Blomfield [*F*] joined in 1927. They continued in it together until his retirement in 1951. He was responsible for the design of a number of houses for government employees, for various princes' houses, for schools and colleges, including the Isabella Thoburn College, Lucknow, and the Forman Christian College, Lahore; and also for a number of banks in Delhi, Gwalior and Bhopal, and for a motor car factory in Calcutta. He retired in 1951.

Robert Proctor Bush [*Retd. L*] died on 18 April, aged 70.

Mr. Bush practised in the Gold Coast Colony, where he carried out work on the Inchabar Dam, on Achimota Secondary School and on the law courts and hospital in Accra.

John Cuthbert Jevons [*A*] died on 8 March, aged 51.

Mr. Jevons was trained at the A.A. after taking an M.A. degree in classics at Oxford. He worked on several London hotels but mainly practised in Bath and Devonshire.

Alfred Sinclair [*A*] died on 23 September 1954, in Argentina, where he had practised since completing his studies at Edinburgh University and at the School of Architecture of Edinburgh College of Art. His work included a hospital for the town of San José de Feliciano, Entre Rios, and the addition of maternity wards to the hospital in the town of Federacion, Entre Rios. Mr. Sinclair was Senator for the Department of Federacion for four years.

Alfred Godwin Geeson [*Retd. F*], died on 16 February, aged 57.

Mr. Geeson studied at the Leicester School of Art and served his articles in Nottingham. He practised in that city and held several teaching appointments. He lectured at Nottingham University College in advanced construction, was a full-time lecturer at the Regent Street Polytechnic School of Architecture from about 1929 to 1933, was appointed Head of the Department of Architecture and Building at Wolverhampton School of Art and Technical

College in 1939 and went from there in 1945 to become Head of the Department of Building in the City of Norwich Technical College. He was the editor of *Practical Painter and Decorator* (Volume II) and of *General Building Repairs* (Volume III) and the author of *Building Science for Students of Architecture and Building* (Volume III).

Mr. Geeson was Grissell Gold Medallist 1928.

Members' Column

This column is reserved for notices of changes of address, partnership and partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

APPOINTMENTS

Mr. R. J. Ivens [*A*] has been appointed Architect to the British Guiana Sugar Producers' Association and will be pleased to receive trade catalogues, etc., at 201 Camp Street, Georgetown, British Guiana.

Mr. Alan Tate, M.C., A.M.T.P.I. [*A*] has resigned his post as a planning officer with Edinburgh Corporation and has taken up an appointment with Messrs. Bovis Holdings Ltd., at 1 Stanhope Gate, London, W.1.

PRACTICES AND PARTNERSHIPS

Mr. N. H. N. Darby, F.R.I.C.S., M.T.P.I. [*A*] has taken Mr. G. W. Hill into partnership in his Taunton office. This practice will be continued under the title of Darby, Hill and Partners at Westminster Bank Chambers, Taunton. Mr. Darby will continue his practice in Weston-super-Mare and Clevedon as heretofore.

Mr. P. Russell Gibbs [*A*] has begun practice at 37 High Street, Huntingdon, and will be pleased to receive trade catalogues, etc.

Mr. Harvey Johnston [*A*] has entered into partnership with Mr. R. H. A. Seath and will be practising under the style of **Johnston and Seath** at Barony House, Cupar, Fife. Trade catalogues will be welcomed.

Mr. F. Milton Harvey [*F*] relinquished professional practice at No. 3 Raymond Buildings, Gray's Inn, W.C.1, at 31 December 1954. Whilst retaining his former London address c/o Mr. Richard Betham [*A*], Mr. Harvey requests that no trade circulars or advertisements be addressed to him in future.

The former partnership between **Mr. C. B Martindale** [*F*] and **Mr. F. Gerald Jackson** [*A*] under the style of Martindale and Jackson has been dissolved by mutual consent. Mr. Martindale will continue to practise at Cathedral Chambers, Castle Street, Carlisle, and Mr. Jackson will practise at Lowther Arcade Chambers, Lowther Street, Carlisle.

Messrs. Ormrod and Banister have dissolved partnership. **Mr. F. J. M. Ormrod,** M.T.P.I. [*F*] is continuing to practise at the same address—49 Rodney Street, Liverpool 1 (Royal 9261/2) as **Ormrod and Partners. Mr. Harry Banister,** M.T.P.I. [*F*], is continuing in practice at 67 Rodney Street, Liverpool 1 (Royal 4147/8), as **Harry Banister and Partners,** Chartered Architects and Planning Consultants.

Mr. Kenneth S. Tayler [*A*] has begun private practice at 6 Gray's Inn Square (Ground Floor West), London, W.C.1, where he will be pleased to receive trade catalogues, etc.

Messrs. Woodroffe, Buchanan and Coulter [*FFF*] have taken into partnership Mr. W. W. Chapman, O.B.E., T.D. [*A*]. The firm will continue to practise from 5 Bedford Row, London, W.C.1, and also at 41 High Street, Tring, Herts.

CHANGES OF ADDRESS AND TELEPHONE NUMBER

Mr. G. A. Bass [*A*], formerly with the Crawley Development Corporation, is now in the City Architect's Department, Priestley House, Leeds 9.

Mr. Ronald S. Biggins [*A*] has moved his office to Richmond House, 123 Boughton, Chester (Chester 23643).

Mr. J. A. Cunnison [*A*] has changed his address to 75 The Downs, Harlow, Essex.

Messrs. Harold E. Davies and Son (Mr. H. Hinchcliffe Davies [*A*]) have moved their offices to Chapel Walks, South Castle Street, Liverpool 1. The telephone numbers (CENtral 3414/5/6) are unchanged.

Messrs. Peter Dunham, Widdup and Harrison [*F/AA*] have opened a London office at 29 Bedford Square, W.C.1 (MUSeum 6575).

Mr. Revel Fox [*A*] has changed his address to 405 Sanlam Buildings, Stockenstrom Street, Worcester, S. Africa.

The telephone number of **Messrs. Hammett and Norton** [*AA*], 29 Sackville Street, Piccadilly, London, W.1, is now REGent 1058–9–50.

Mr. A. J. R. Jennings [*A*] has recently taken an appointment with the Architect's Department of the Essex County Council and his home address is now 61 Hillside Grove, Chelmsford, Essex.

Messrs. Wm. L. Lowe and Partners of 1–3 Eberle Street, Dale Street, Liverpool 2 and at Southport have changed their title to **W. L. Lowe, Ferguson and Partners.** Their Southport office address is now changed to 31 King Street (Southport 4411). The partners continue to practise as before.

Mr. R. B. Martin [*A*] has moved his office from Birmingham to Woodthorne House, Bluntington, Chaddesley Corbett, Worcestershire (Chaddesley Corbett 366).

Mr. R. W. Mellor [*A*] is now resident in Accra, Gold Coast. His address is Resident Architect, Accra Hotel, c/o Taylor Woodrow (W. A.) Ltd., P.O. Box 971, Accra, Gold Coast.

Mr. Hugh Owen [*A*], A.A.Dipl., M.Arch. (Toronto), has been appointed Senior Planner to the City of Portland and his address will be c/o Planning Department, City Hall, Portland, Maine, U.S.A.

Mr. J. G. R. Pring [*A*] has terminated his employment with the Timber Development Association and is now travelling in the U.S.A. and Canada with a view to beginning practice there. His forwarding address is 22 Howard Street, Cornwall, New York, U.S.A.

The telephone number of **Messrs. Robinson and Kay** [*AA*] of Victoria Chambers, 94 High Street, Stourbridge, has been changed to Stourbridge 3154–5.

Mr. Allan W. Vincent [*L*], Borough Architect of Harwich, has changed his private address to No. 65 Park View Road, Ipswich, Suffolk.

Mr. John Ridley Wallace [*A*] is now at 3 Elmley Lodge, Old Church Road, Harborne, Birmingham 17.

Mr. Keith Waugh [*A*] has taken an appointment in Singapore and his address is now c/o Messrs. Palmer and Turner, P.O. Box 771, French Bank Building, D'Almeida Street, Singapore.

Messrs. Chris. W. Wilkins and Son [*F*] of Havant, Hampshire, have opened a branch office at Mengham, Hayling Island, Hampshire, where they will be pleased to receive trade catalogues, etc.

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

Associate requires partnership or responsible post leading thereto, preferably Bristol area or coastal belt Portsmouth–Plymouth. Over 30 years' experience private practice, local government and government departments; varied work, including period and contemporary design. Moderate capital available. Box 41, c/o Secretary, R.I.B.A.

Old-established practice for sale in inland resort, Derbyshire. Excellent opportunity for member with general experience. Principal plans to retire at an early date. Box 56, c/o Secretary, R.I.B.A.

Associate, aged 36, requires partnership or position leading thereto, any district considered. Considerable experience in commercial architecture, including administration. A small amount of capital available. Box 59, c/o Secretary, R.I.B.A.

Associate (34) with experience of traditional and contemporary work seeks partnership. Capital available. Box 60, c/o Secretary, R.I.B.A.

Associate, Dip. Arch., ten years' experience with prominent architects and authorities, desires a partnership in an established practice in the Counties of Warwickshire, Oxfordshire, Berkshire or Gloucestershire. Some capital available. Box 61, c/o Secretary, R.I.B.A.

ACCOMMODATION

Two light offices required, about 400 sq. ft., preferably W.C.2 area of London. Reasonable rent. Full particulars to Box 55, c/o Secretary, R.I.B.A.

Architect wishing to begin private practice in central London is required as tenant by firm of architects. Two rooms available at moderate rent. Possibility of some collaboration. Box 57, c/o Secretary, R.I.B.A.

Member requires 300–500 sq. ft. of office accommodation in Bedford Square, Portman Square or Sloane Square areas of London. Box 58, c/o Secretary, R.I.B.A.

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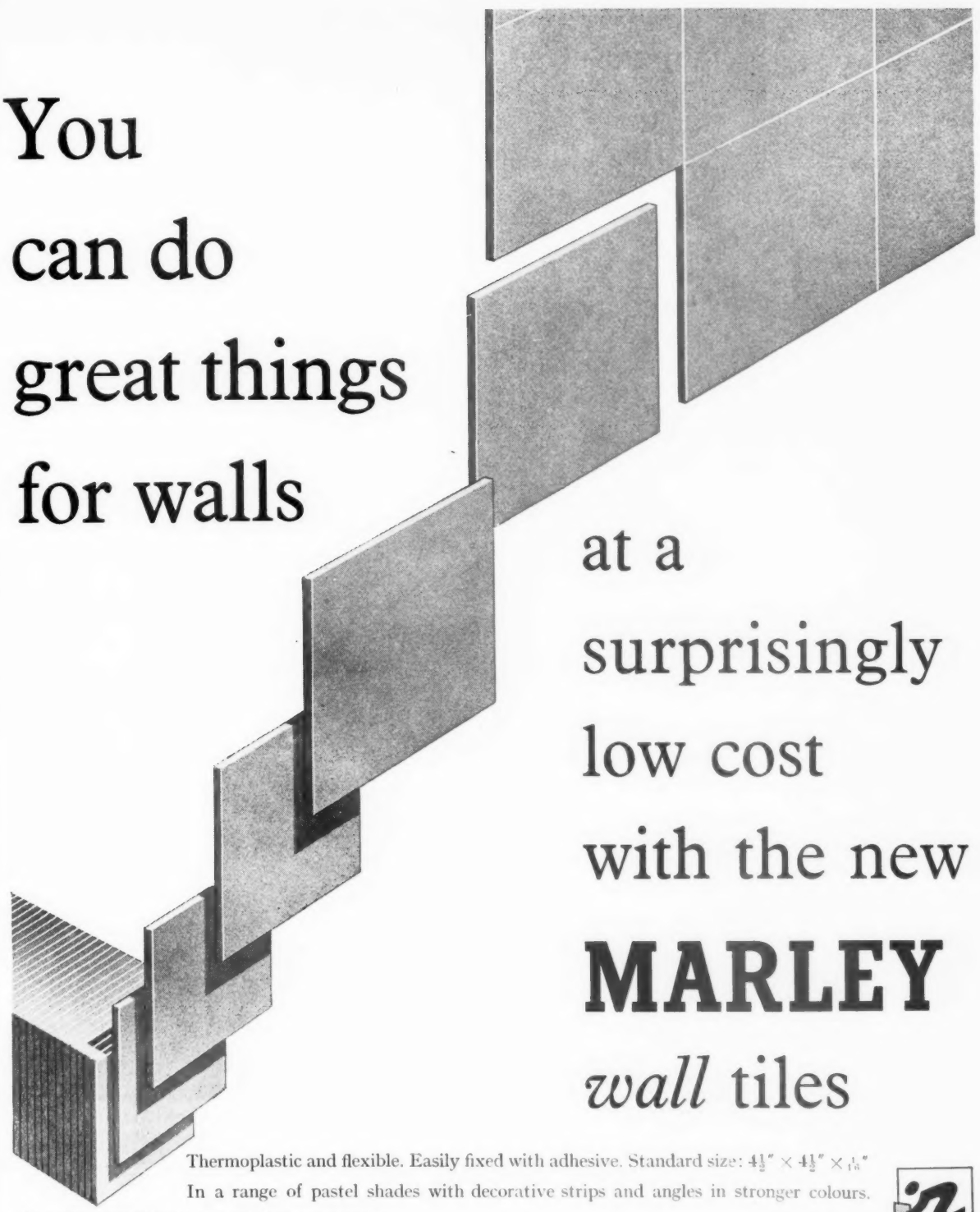

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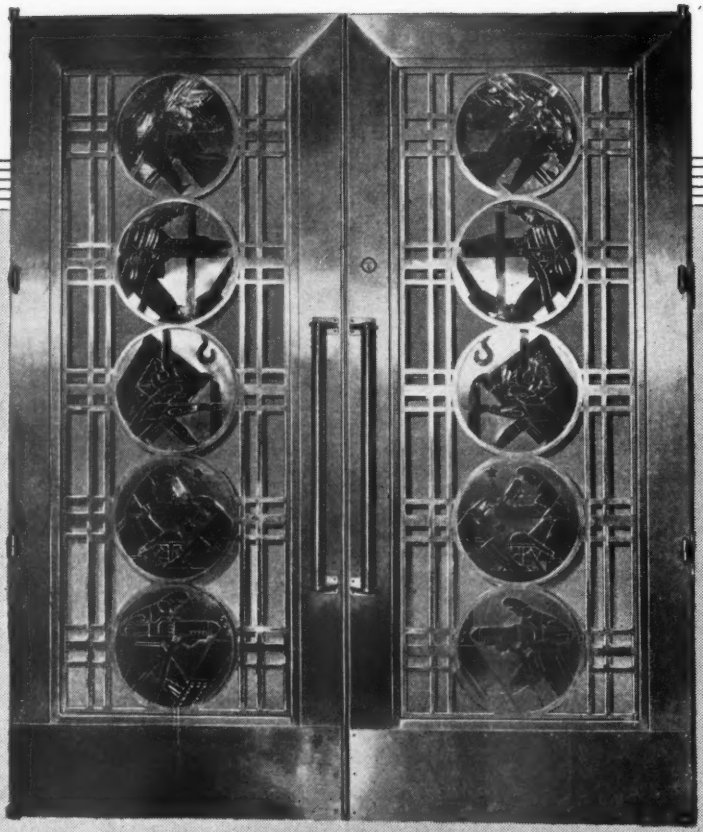

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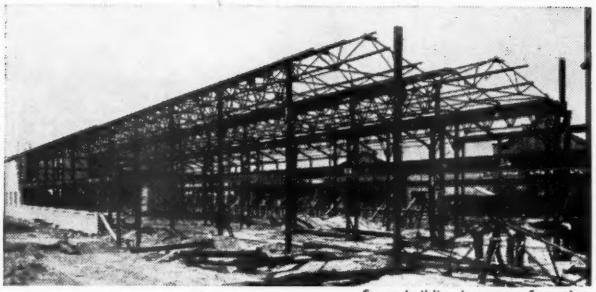

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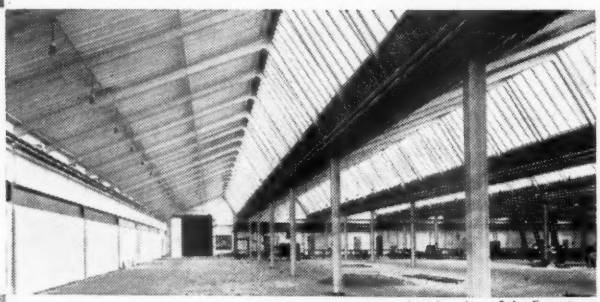
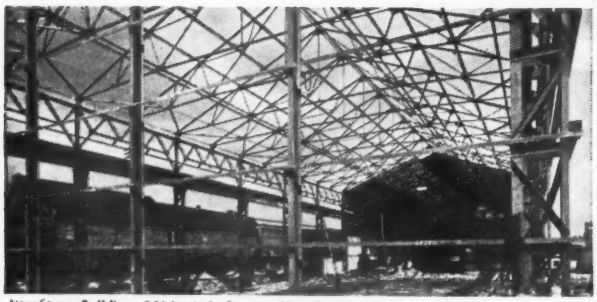


Interior view of the Factory at Barnsley, Messrs. Brook Motors Ltd.



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Put down Salt Glazed Vitrified Clay Pipes and Conduits—they stay down for centuries!

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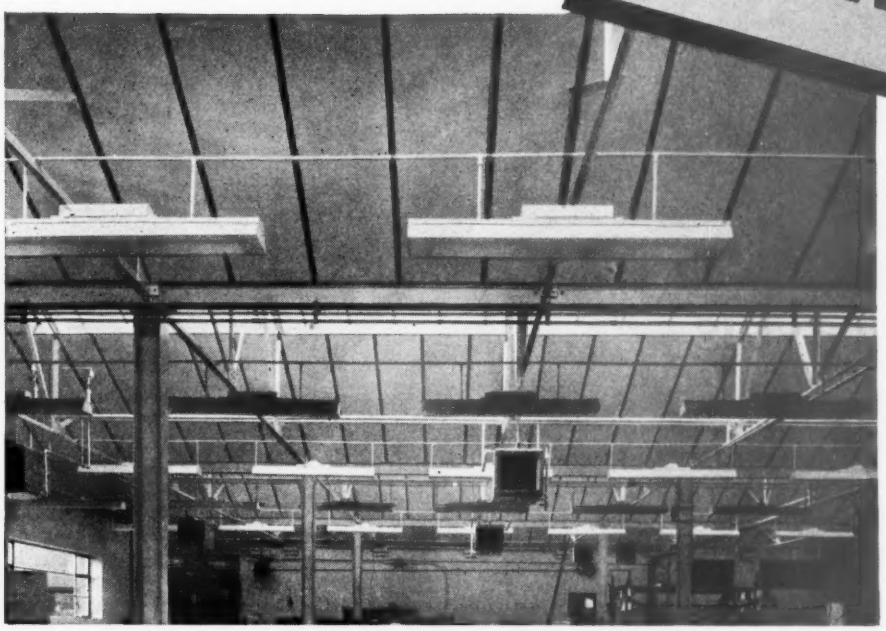

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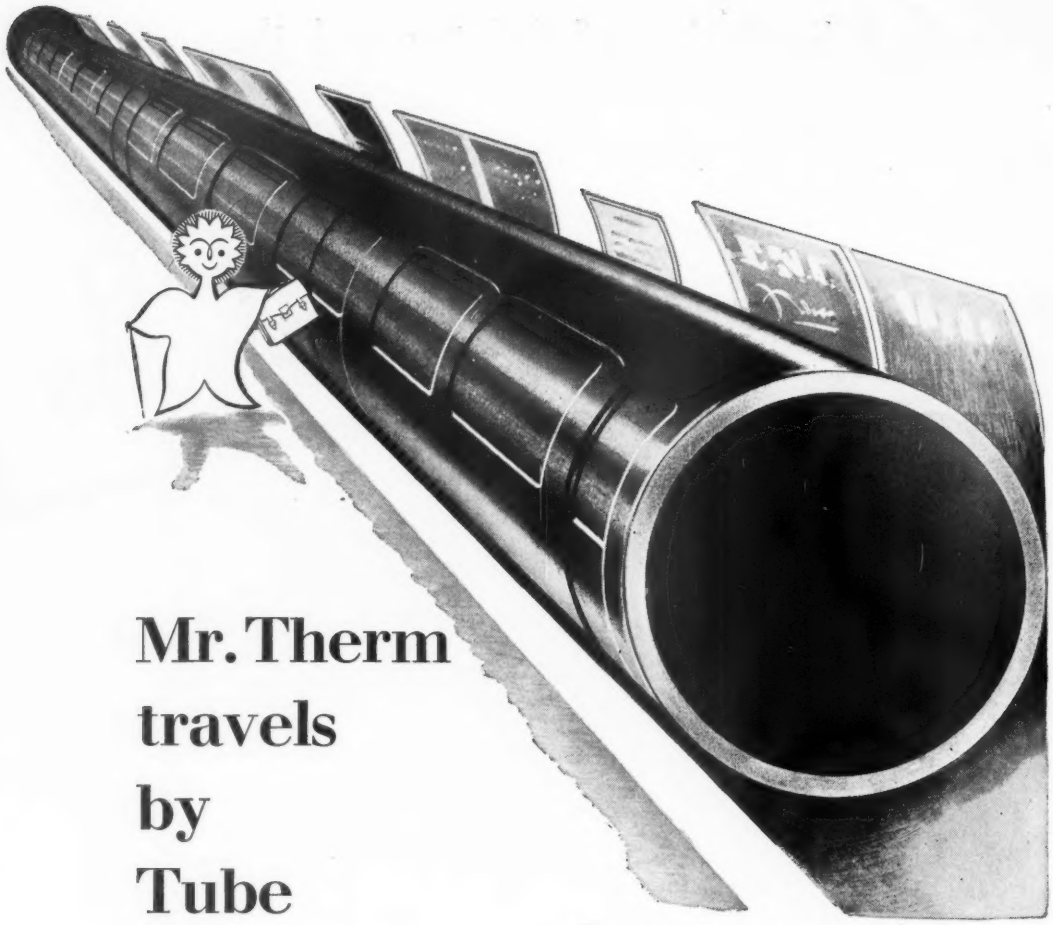

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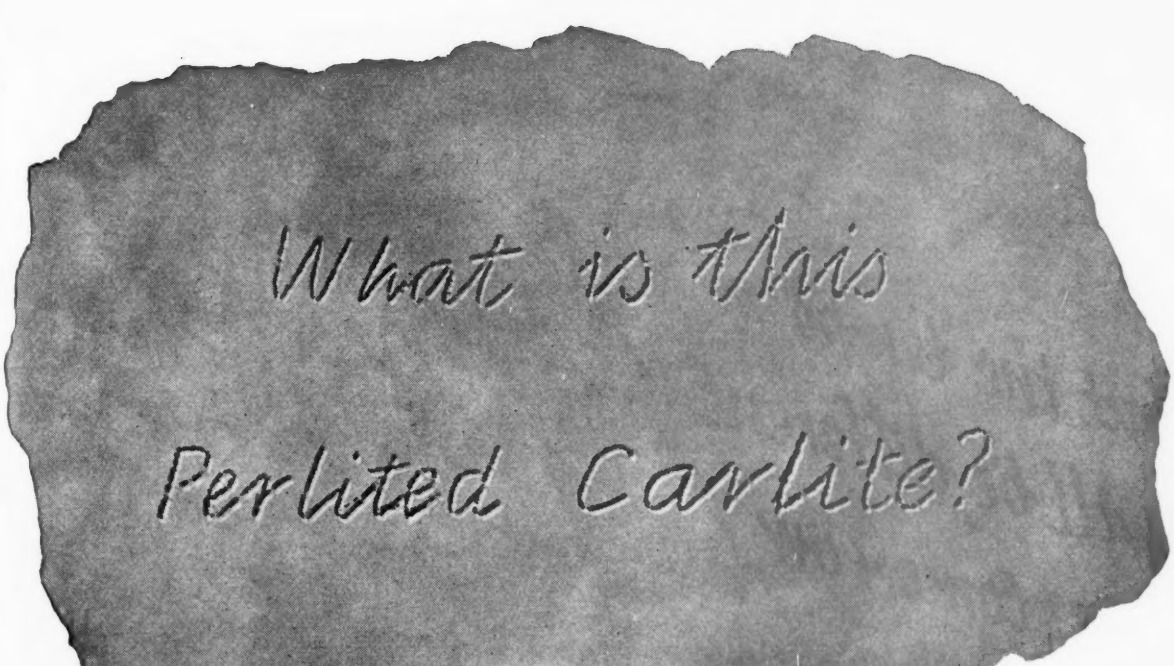

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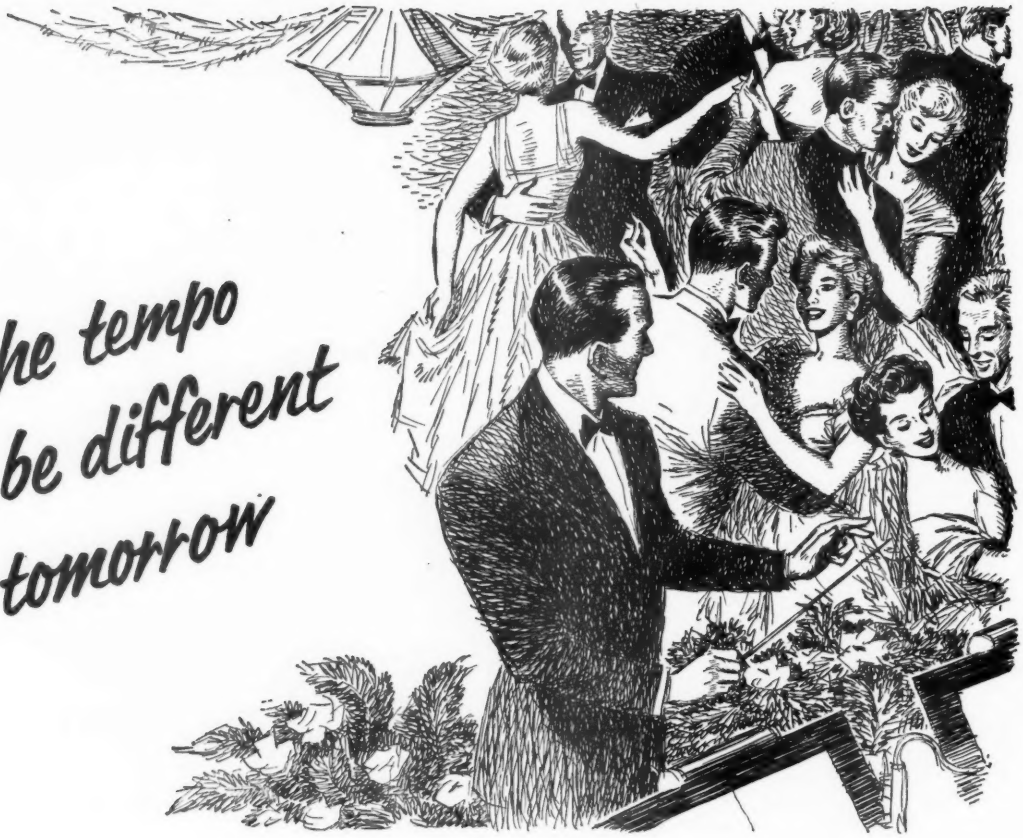

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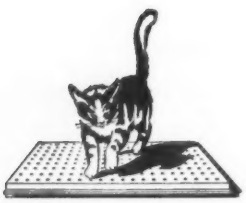

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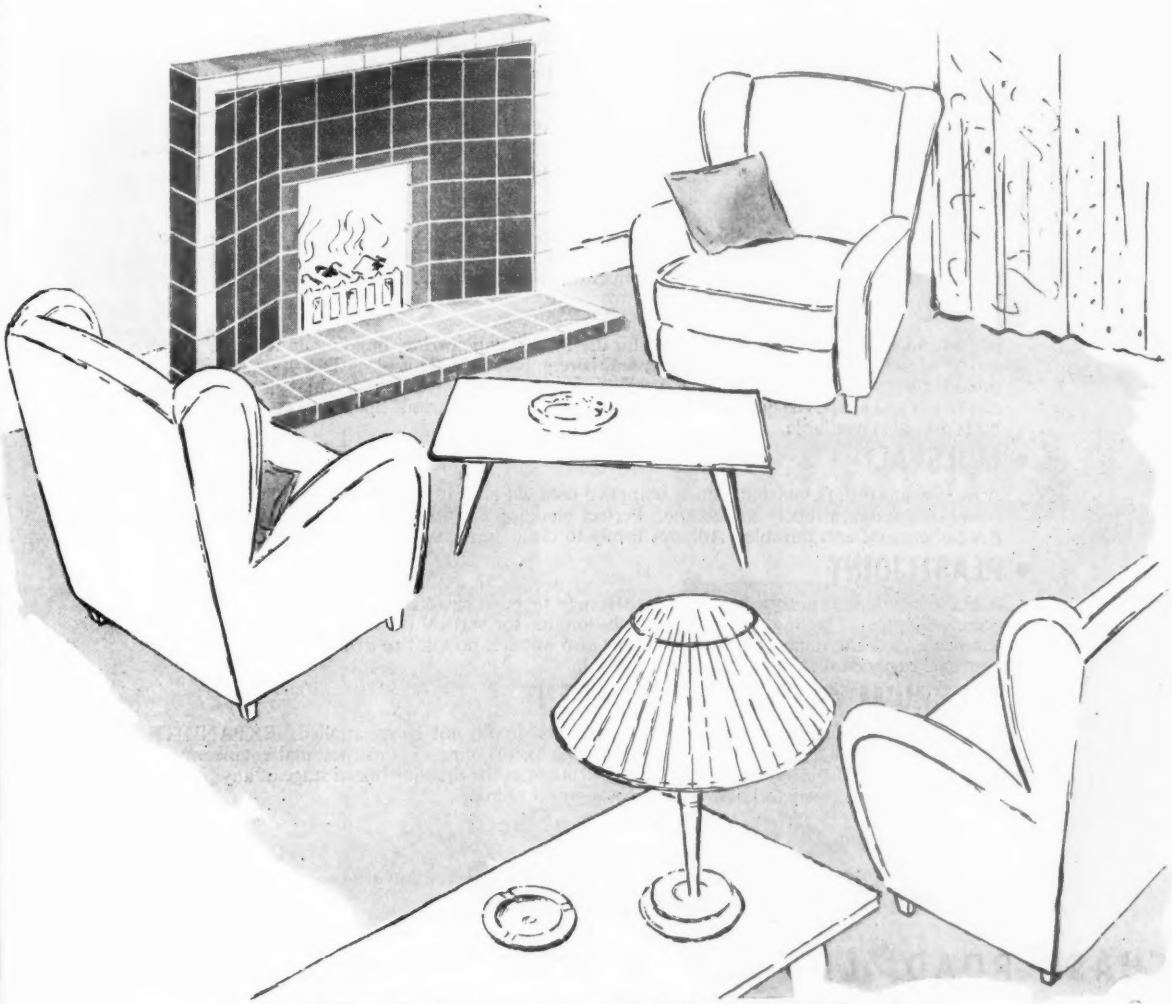

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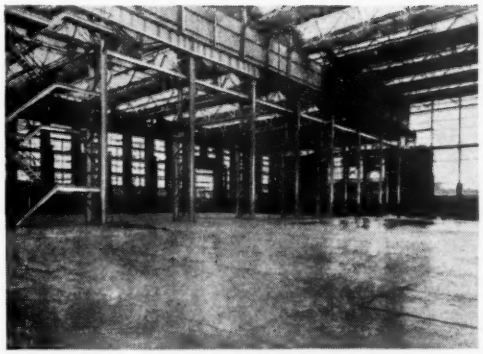

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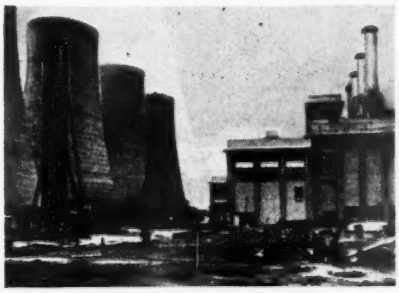

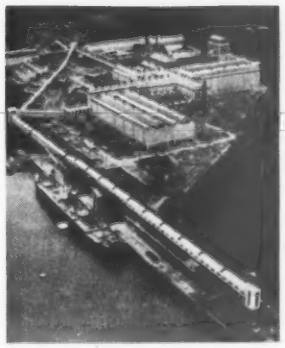

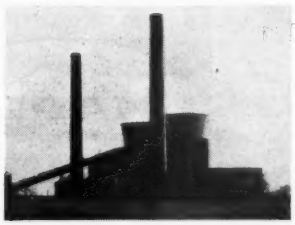

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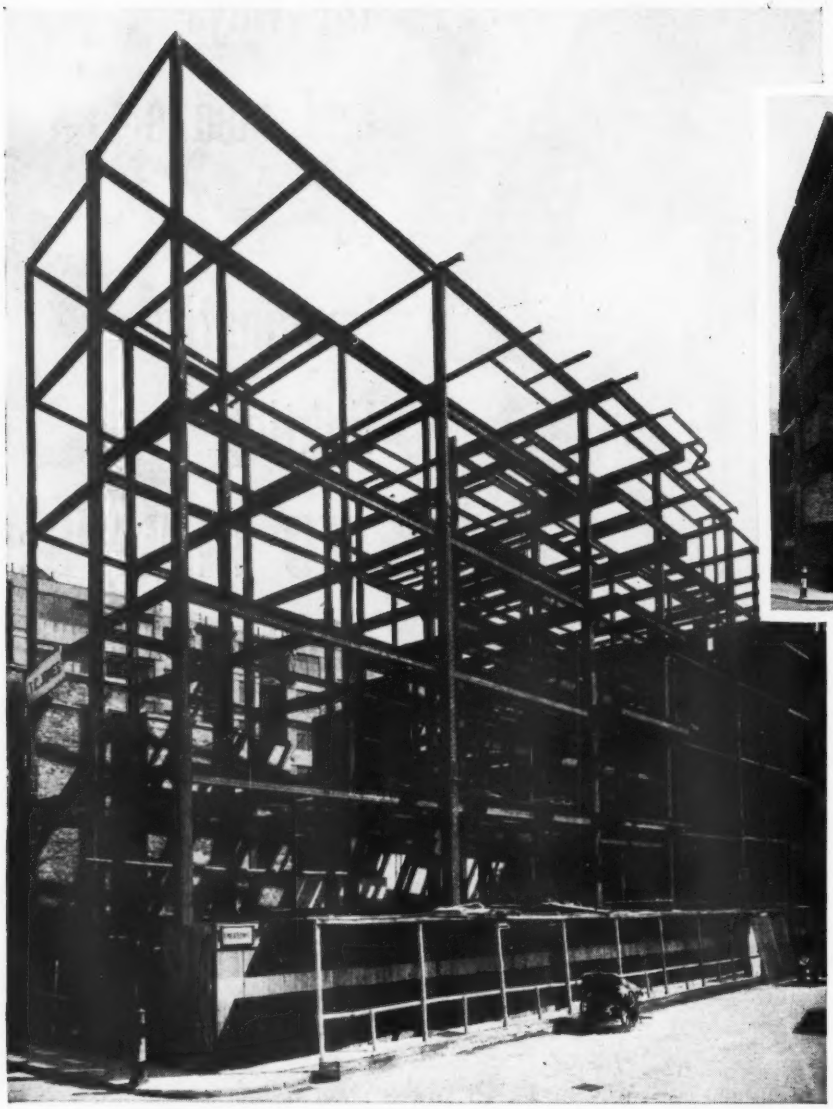

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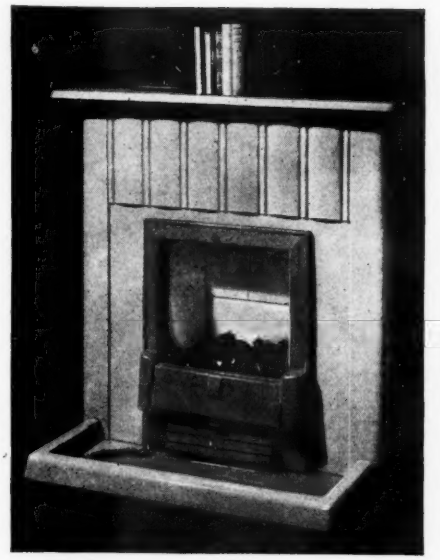

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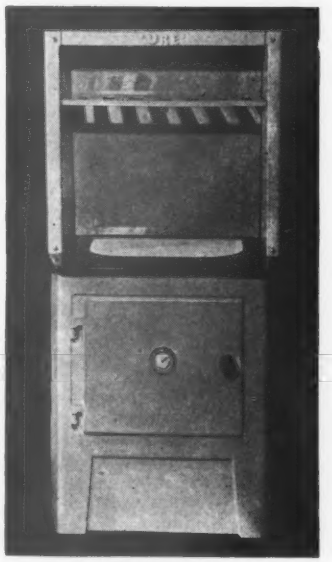

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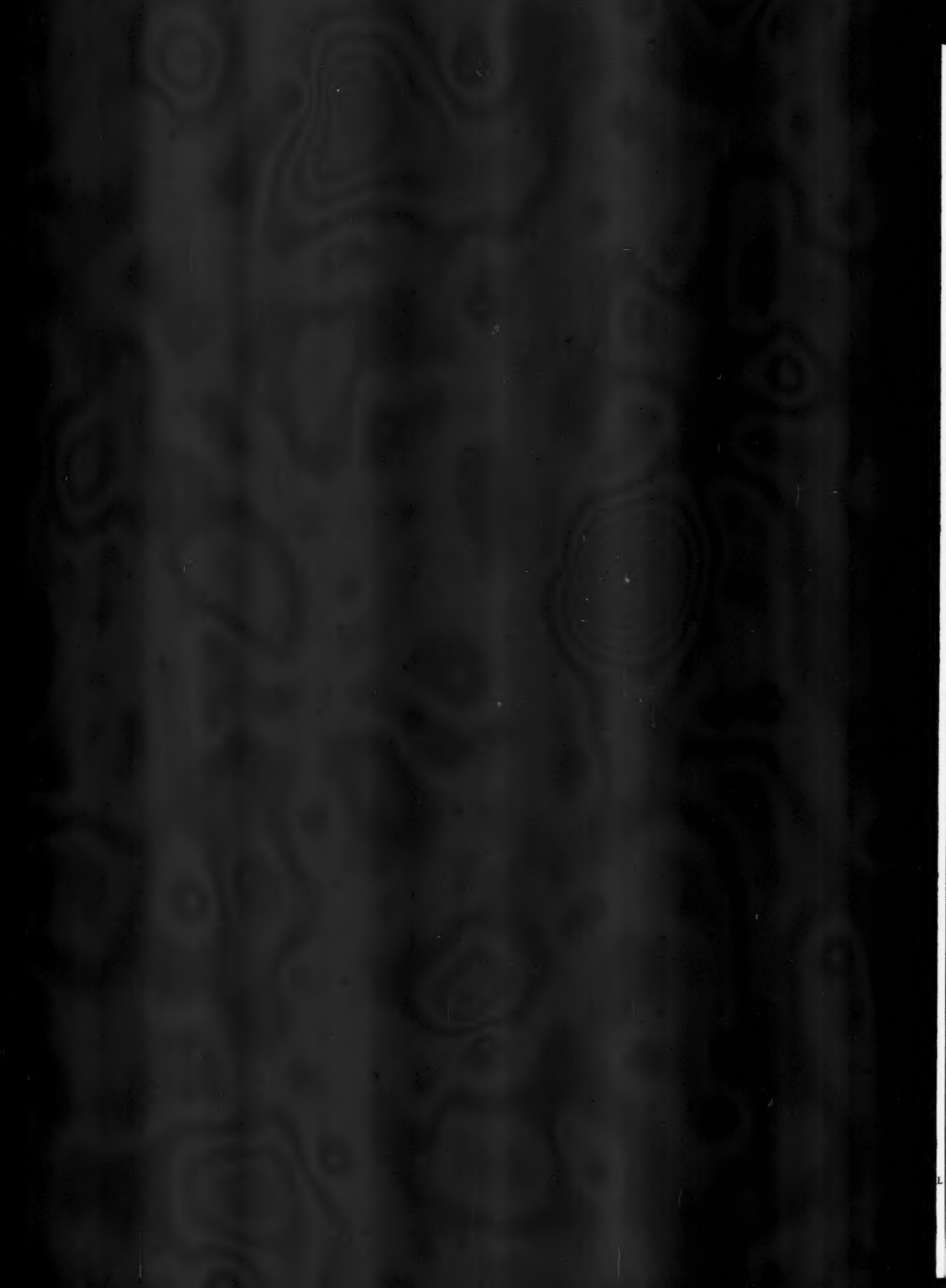

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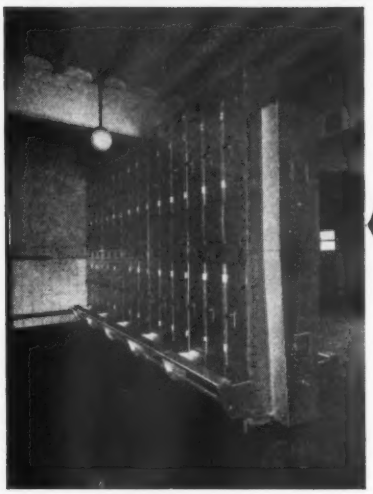

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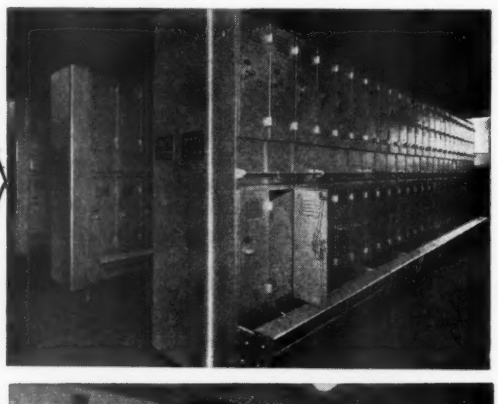

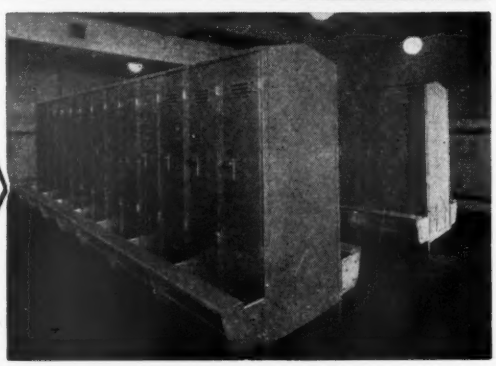

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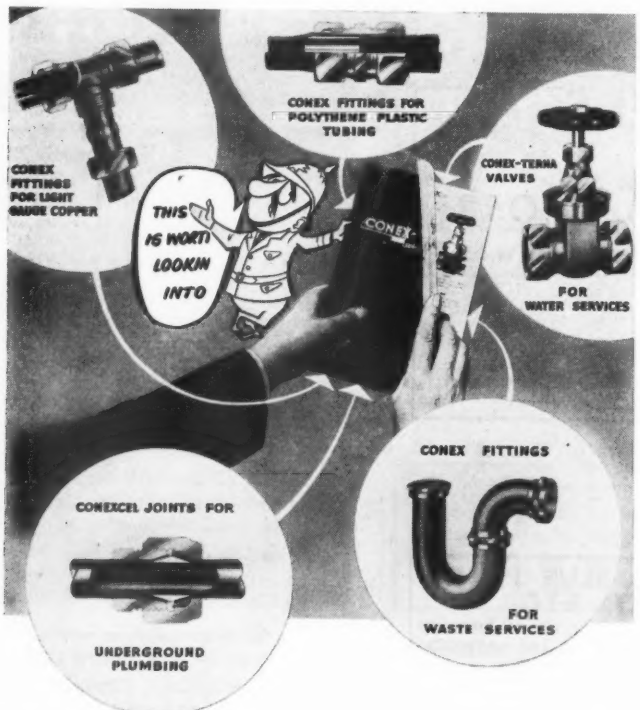

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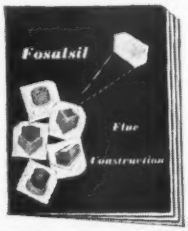

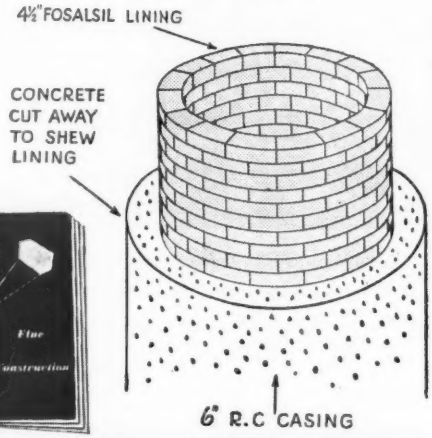

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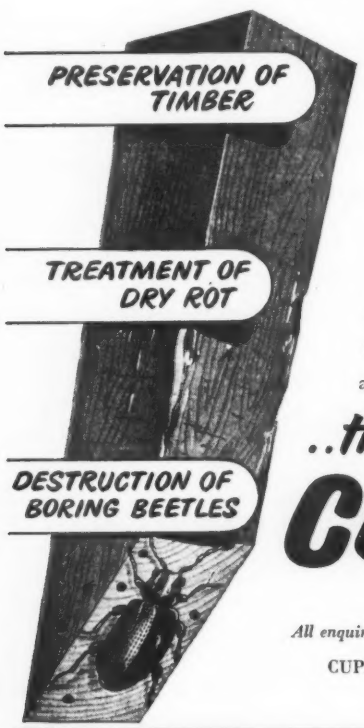

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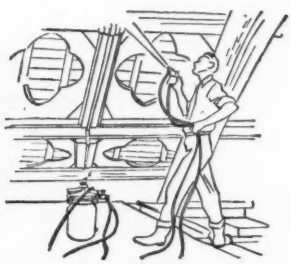

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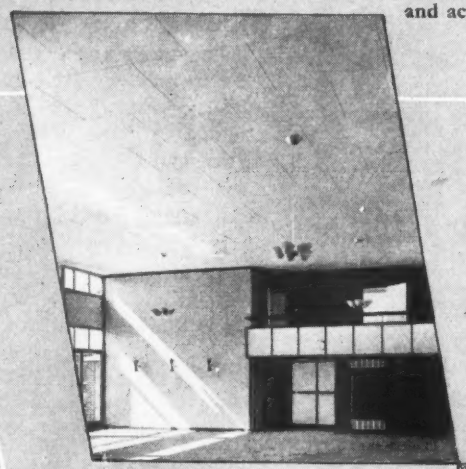

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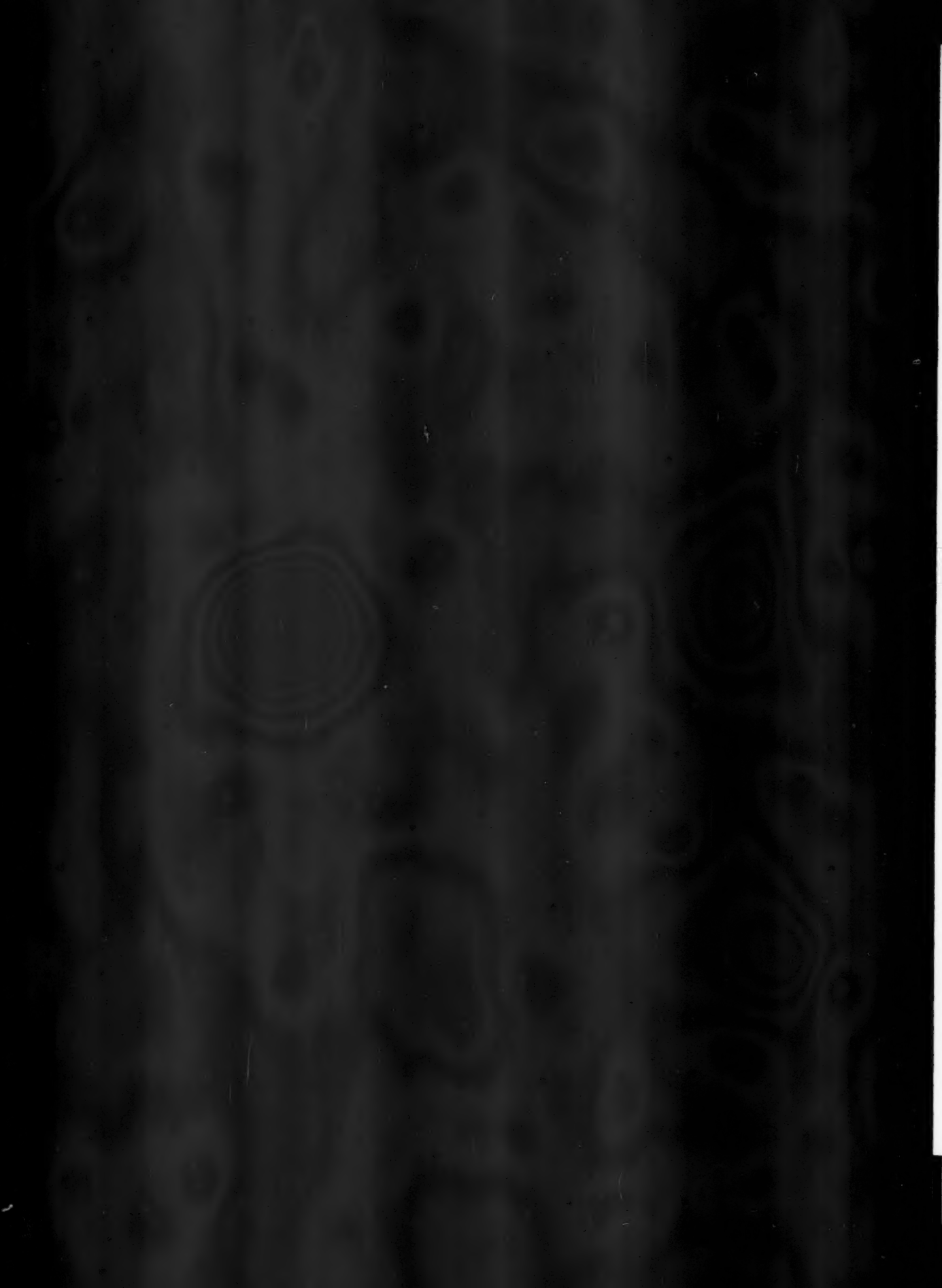

Building Research Station Digest

No. 79.

JULY, 1955

INTERNAL CORROSION OF CONCRETE SEWER PIPES BY EFFLUENTS CONTAINING SULPHATES

THE TREATMENT OF WALLS INFECTED WITH DRY ROT

REPAIRS TO MASTIC ASPHALT AND FELT ROOF COVERINGS

Internal Corrosion of Concrete Sewer Pipes by Effluents Containing Sulphates

B.R.S. Digest 31 dealt with the attack on concrete by sulphates in soils and ground waters. Soil conditions were classified into three classes according to the concentration of sulphur trioxide present in the clay or ground water, and precautions were outlined for different types of concrete work.

Portland cement concretes differ considerably in their resistance to attack by sulphate waters, from the very vulnerable lean cast-in-situ ballast concretes to the much more resistant dense precast concrete products made with rich mixes. The concentration of sulphate salts to which they may be exposed with safety varies correspondingly.

In classifying ground waters according to their content of sulphates it was noted that concentrations up to 300 parts sulphur trioxide per million were not likely to damage even the poorest concrete. Ground waters containing less than this amount were called Class I and it represents, in general, the safe limit for lean concretes cast-in-situ. It appears that some authorities have also adopted this figure as the safe limit to apply to the much denser and more resistant Portland cement concretes used in the manufacture of concrete pipes and accordingly have considered it unsafe to permit effluents containing more than 300 parts sulphur trioxide per million to enter existing concrete sewers. Concrete pipes conforming to B.S.556–1945* are composed of dense concrete made from mixes not leaner than 1 : 4 and are cured for not less than six weeks before use, the date of manufacture being marked on each pipe or fitting. Moreover, there is little or no tendency for evaporation at the exterior to draw the salts into the concrete and so to accentuate the risk of attack. As was indicated in Digest No. 31, there is little risk in exposing such concretes in sewers to substantially higher concentrations. Taking into account the condition of exposure and the density of Portland cement concrete pipes conforming to B.S.556, it may be assumed as a rough working rule that a concentration of sulphur trioxide in the sewage should be regarded with suspicion if it reaches 1000 parts per million over any considerable period of time. The same limit may be applied to asbestos-cement pipes which equal very dense concrete pipes in their resistance to attack. Where new works are concerned, and it is known that higher concentrations of sulphates may occur, suitable precautions can be taken by the use of cements that are more sulphate-resistant.

The above limit applies to direct attack by neutral salts of any sulphur acids and covers their total content calculated as sulphur trioxide. It does not apply to acidic effluents, which are much more damaging.

Deterioration is also sometimes experienced in sewers as a result of the reduction by anærobic bacteria of sulphur compounds to hydrogen sulphide, which is subsequently oxidized to sulphuric acid at the exposed concrete surface above the level of normal flow. No definite relation has been found in practice between the

* This Standard is now in course of revision but the requirements as regards quality of concrete will be not less stringent.

content of sulphur compounds in sewage and the incidence of such troubles. Normal sewage commonly contains enough sulphur compounds to give rise to hydrogen sulphide production if the other conditions that favour it are also present. In the exceptional cases of systems where such troubles have arisen, some benefit may be obtained by keeping down the content of sulphur compounds, as far as may be practicable, though more specific methods of treatment are available (e.g. maintaining a rate of flow that at all times ensures ærobic conditions, or adding oxidizing agents such as chlorine to the sewage; the anærobic conditions that give rise to hydrogen sulphide can thus be avoided). Such exceptional cases need individual consideration.

The Treatment of Walls Infected with Dry Rot

As a result of recent investigations, earlier recommendations for sterilizing walls infected with the dry rot fungus (e.g. those given in the Station's *Repair of Damaged Buildings Note No.* 9), need modification in so far as they concern the choice of fungicide. The following is an extract from the latest revised edition of the Forest Products Research Laboratory's *Leaflet No.* 6. Copies of the leaflet can be obtained free on application to the Laboratory at Princes Risborough, Aylesbury, Bucks.

"4. Sterilize the surface of all brickwork or stonework which has been in contact with decayed wood or which is permeated with fungal strands. This is usually effected by heating, with a powerful blowlamp, the surface of the wall until it is too hot to touch, followed by the plentiful application of a fungicide.

The following fungicides have been used extensively for the sterilization of infected walls:—

(a) Sodium pentachlorphenate at a strength of 8 ounces to the gallon of water. This has been increasingly used in recent years and is probably the most effective substance for this purpose.

(b) Mercuric chloride (corrosive sublimate) at a strength of one part in 1000 parts of water or methylated spirits is also highly effective but this solution is intensely poisonous and must be handled only by skilled and responsible persons. It should be used only for surface treatment and not for 'irrigation' of walls (see below).

(c) Magnesium silico-fluoride at a strength of 16 ounces to the gallon of water and sodium fluoride in a saturated solution in water (i.e. about 6 ounces to the gallon of water) have been used extensively. Though these substances are highly toxic to fungi, there are indications that their effectiveness is reduced after contact with lime mortar.

Where dampness is likely to persist in solid walls that are deeply permeated by strands of *Merulius* an 'irrigation' treatment should be carried out along the following lines; the detailed procedure will, of course, vary according to the type of wall concerned:

Holes should be made in the wall at 3-ft centres at the upper limit of the infected area, either by removing whole bricks or by drilling into the wall to a depth of 9 in. or so. Solution is then poured into the holes through a funnel (bottles with the bottoms knocked off make convenient and cheap funnels). The treatment should be continued until fluid appears at a second line of holes cut into the wall 3 ft or so lower down; if necessary, these holes may then in their turn be used to receive more fluid. This process is continued until the required height of wall has been irrigated.

Only if the mortar has perished or when the bricks themselves are permeated with fungus should it be considered essential to rebuild brickwork into which the strands have permeated.

5. Allow the walls to dry out after treatment and brush off any efflorescence of salts on the surface of the wall."

The efflorescence following an irrigation treatment may be heavy and long continued, particularly if sodium or magnesium salts have been used.

A treatment using a barrier layer of zinc oxychloride paint or plaster was described in *The Builder*, 1952, **182** (5706), pp. 975–7. The material is relatively expensive but its use in special cases might be considered.

Repairs To Mastic Asphalt and Felt Roof Coverings

MASTIC ASPHALT

A mastic asphalt roof covering properly laid on a suitable base needs little or no maintenance, but repairs or alterations may sometimes be needed. It does not become porous but slight cracks may be caused, for example, by mechanical damage, by movements of the substructure or of parapet walls or because of the omission, or the use of the wrong type, of felt underlay; again, alterations to the building may require that part of the asphalt covering be removed or broken through and new work has then to be joined to old. Repairs and alterations to asphalt must be carried out with care and the work should be entrusted to a specialist firm, preferably the one that laid the asphalt originally. The general precautions that must be taken are described in the following notes which are based largely on the Station's *Repair of Damaged Buildings Note No.* **5**, now out of print.

Surface dressing

Since mastic asphalt does not become porous any lack of watertightness is due to the formation of cracks. Surface dressing must be considered, therefore, as a temporary expedient, which may be adopted where the cracks are fine and are distributed over a small area, rather than as a permanent repair. Mere painting is, however, not likely to be satisfactory; paint needs to be applied in conjunction with a close-textured fabric. The asphalt surface is given a coating of a suitable bituminous compound and the fabric is bedded down on this whilst it is still wet. When the surface has become tacky, a second coat is applied and allowed to dry for 24 hours before a third coat is applied. A dusting with fine dry sand while the compound is still wet will give added protection.

Suitable bituminous compounds are often described as of "heavy painting consistency". They are usually of the emulsion type but solutions or cutbacks are also available; they must not contain materials likely to soften the asphalt. Some are applied cold either by brush or by trowel; others may need *gentle* warming. Tar compounds must not be used.

The fabrics should be close woven and yet allow penetration of the bitumen adhesive. They include cotton sheeting, weight $2\frac{1}{2}$–$3\frac{1}{4}$ oz per sq. yd having about 20×16 threads to the inch, and jute hessian, weighing about 6 oz per sq. yd, with a mesh opening not greater than $\frac{3}{32}$ in. The openings should be clear and the threads clean. The fabrics should preferably be rot-proofed and bitumenized; they should first be preshrunk, i.e. soaked in water and dried, if the rot-proofing process is one that does not have this effect.

Removal and replacement

The repair of large cracks and of badly cracked areas will involve the removal and replacement of part of the asphalt. Removal must be done with care to avoid damaging adjacent asphalt that is to be left, an operation requiring skilled craftsmanship. The correct method of removal and the preparation of the old asphalt along the line of joint are described below. The preparation of the substructure and the laying of the new asphalt will follow normal practice for new work as described in B.S. Code of Practice CP.144.201: "Mastic asphalt roofing".

(a) Considerable damage may be caused to existing asphalt by attempting to cut it away with hammer and chisel or to soften it with a blowlamp. Rough handling will increase an existing defect and may also cause fresh damage. The recognized method of removing asphalt is to lay a "poultice" of fresh hot asphalt along the boundary of the area to be removed. This is left until the old surface has become warm and soft. The hot asphalt is peeled away and the underlying asphalt may then be readily cut out with a trowel.

(b) When joining new to old asphalt the edge of the old asphalt should be softened as described above to permit removal of material to a depth of half its thickness and to a width of not less than 3 inches. This enables a lapped joint to be formed when the new asphalt is welded to the old by the float.

BITUMEN ROOFING FELT

A roof covering of bitumen felt is more easily damaged than an asphalt covering, e.g. by foot traffic, or, if the fixing or bonding is inadequate at any point, by a high wind; to ensure a long life it needs a suitable bitumen dressing at intervals. Bitumen felt roof coverings should, therefore, be inspected more frequently than other forms of roof covering and repairs made to any small holes and tears, joints that have opened, skirtings that have pulled out from walls and parapets and flashings that have been disturbed. Skilled workmanship is necessary. Blisters or bulging are not necessarily harmful unless punctured, though they are liable to damage by foot traffic.

Repairs

Minor defects can be dealt with either by sticking down the torn edges alone or by covering them with patches giving a minimum lap of 3 in. beyond the defect, using hot bitumen or bituminous lap cement for cold application.

When the injury extends to the greater part of a width of felt the removal of the faulty width without extending the damage may be difficult. It will normally be better to leave the faulty areas in position and to apply a further layer over the whole. One method that has been used for removing a damaged sheet is as follows. The joint is warmed gently by means of a hot iron or blowlamp until the bitumen is soft, when the layers of the sheet can be separated and turned up. The damaged sheet can then be separated from the adjacent one and heated further if necessary to separate it from the roof surface. The new sheet is then inserted and the joint sealed with fresh bitumen or lap cement. There may be difficulties in this procedure if the felt has been heavily gritted or where the felt has been nailed down to boarding. Fixing of new sheets should follow normal practice for new work as described in B.S. Code of Practice C.P.144:101: "Bitumen felt roof coverings".

Surface dressings

The efficiency and life of bitumen roofing felts depend largely on the condition of the exposed surface. The Code referred to states that "the life of bitumen felt roof covering will be extended by applying a suitable bitumen dressing at intervals of about 5 years, dependent on the state of the roof on inspection". The following notes refer only to surface dressing of the self-finished bitumen felts and the coated and sanded bitumen felts, classes 1C and 1D of B.S.747: 1952. There has been insufficient experience of surface dressing of mineral-surfaced bitumen felts for any recommendations to be given; the manufacturer of the felt should be consulted.

The dressing materials for sloping roofs are essentially bitumen solutions or cutbacks, applied cold and spread at the rate of 1 gallon to 200 sq. ft; while still wet the dressing is blinded with sand or fine gravel. The bitumen solutions contain a volatile thinner and dry quickly. Cutbacks are stiffer in consistency, they dry much more slowly and sometimes need gentle heating for application. Tar compounds should not be used.

For flat roofs an oxidized bitumen of softening point about 180–200°F should be spread at the rate of 30 lb per 100 sq. ft and, while still hot, should be blinded with fine dry grit of mesh size between 14 mesh and $\frac{1}{8}$ in. at the rate of about 1 lb per sq. ft. Adhesion of the grit will be greatly improved if the grit is first heated and if the job is done in warm weather.

(Prepared by the Building Research Station, Garston, Watford, Herts.)

Corrigenda

Digest No. 45: "The durability of roofing slates". Attention has been drawn to the possibility that the description "fresh battery acid" in the last paragraph on page 3 might be misunderstood and that *concentrated* sulphuric acid might be used. The penultimate sentence should be amended to read ". . . by pouring fresh battery acid of specific gravity 1·25 carefully and slowly into an equal volume of water".

Digest No. 74: "Corrosion resistant floors, Part II," page 2, col. 1. The thickness of mastic asphalt in factories is given, in error, as $\frac{1}{2}$ in. The third sentence in this paragraph should read, "The usual thickness in factories is 1 in."

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For descriptive literature about AZOFLEX machines and materials, please apply to Ilford Limited, Azoflex Department AZ3J, 104 High Holborn, London, W.C.1 (Telephone : HOLborn 3401). Demonstrations of the Azoflex process can be seen at this address and also, by appointment, at Ilford Limited, 22 Lloyd Street, Manchester 2 (Telephone : Deansgate 4233) and in other principal cities.

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PHOTO·PRINTING MACHINES AND MATERIALS

Scheme in Progress

Perspective drawing by John Bloxham, A.A.Dipl., A.R I.B.A.

Flats, Maisonettes, Shops
Area 'C', Regents Park, London

FOR THE METROPOLITAN BOROUGH OF ST. PANCRAS

Architects: Davies and Arnold, F.R.I.B.A., Consulting Engineers: G. A. Dodd and Partners

Area 'C' comprises the construction of 240 flats, five maisonettes and five shops and is part of a scheme for erecting 1,600 multi-storey flats. The buildings will be faced with sand-faced multi-golden wirecut facing bricks. They will all have basements with lock-up storage and wash houses

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JOHN LAING AND SON LIMITED, GREAT BRITAIN, CANADA, UNION OF SOUTH AFRICA, RHODESIA

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